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KSC team readying Lunar Module for moon flight

The second last Apollo shot is scheduled for liftoff just before 11 a.m. Sunday, April 16, EST.

The way things stand now, the "hot" job of hypergolic loading has been completed and the countdown demonstration is scheduled to be under way. That's to end on the 29th. Next in line is launch vehicle propulsion securing (topping off the tanks). A half-day interim countdown is set for the 30th. Through April 5-7, LM supercritical helium deservicing is to be going on. The actual launch countdown starts on the 10th.

The LM (Lunar Module) is to land in a fairly smooth area in the moon's southern highlands, a region named for René Descartes, a French mathematician and philosopher. The main reason for selecting the Descartes area is its scientific value: It's believed that in the highlands the astronauts can gather rocks that may be the oldest on the moon.

'New rocks'

The Descartes region also contains "new" volcanic rocks, and those, with the highland rocks, added to the rocks brought back to earth from earlier trips, may give scientists an understanding of the history of the moon and our solar system.

The on-the-moon LM-11 explorers this time around will be Capt. John Young, mission commander, and Lt. Col. Charlie Duke, LM pilot; doing the moon-orbiting while Young and Duke are on the lunar surface will be Lt. Cdr. Ken Mattingly, Command Module pilot. The men on the back-up crew will be Fred Haise Jr., Capt. Ed Mitchell, and Lt. Col. Stu Roosa.

As has been the case in every lunar landing mission since the first in July of 1969, the script this time will be a bit different from the others. For the LM crew, there's a welcome change: The lunar stay will be for 73 hours—six more than before—in order to give the LM duo more rest time. Past experience has shown that the men need it.

Of the new items on the agenda for LM-11, probably most significant is a far ultraviolet camera-spectograph. The film in the UV camera is highly sensitive to electrons, so it differs markedly from usual film. The principal advantage of the UV film is its speed—10-to-20 times faster than typical film—though it has the additional advantage that it's insensitive to visible light. This latter point is an important one because the earth is approximately one thousand times brighter when viewed with visible light than when viewed with UV. **And** the optical image is exactly duplicated by the electron image, but unlike the typical camera, the UV permits a unique analysis of the chemical elements in the original light source.

First job on the docket for the UV camera is a photo of earth. Then come photos of the moon's horizon, to see whether volcanic gases are present in the Descartes area. Hopefully, the camera might pick up gases in "empty" space, and study the ultraviolet haloes around the galaxies. All of this effort might also determine whether the moon would make a good site for astronomical observations.

Of significance, too, is a cosmic ray detector experiment that may help scientists to understand the source and

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See work on Apollo as vital in Shuttle bid

The "miracle" of the space program that has placed eight astronauts on the surface of the moon is already outdated. However magnificent the achievement —and it was magnificent — it's but a proof of what can be done, a way station on the space road leading, shortly, to a near-space transportation system, the Space Shuttle.

For Grumman there's a feeling akin to "we've traveled this road before." Literally, of course, we haven't; but the feeling remains valid because of our experience in space work. The technology is familiar, as are the management systems. And the talents, the know-how, and much of the equipment are present.

Past experience—at White Sands, at KSC (Kennedy Space Center), at MSC (Manned Spacecraft Center)—has provided assurance that the Company has the ability to manage the Shuttle Program and build the Orbiter. For example, take the case of White Sands, where the LM (Lunar Module) engines had to be test-fired and proved. Roy Standefer was in charge of that New Mexico facility, and he spoke about the job, and the success of it, recently:

Site activation

"It began in 1963, when we needed a test-stand to fire LM ascent and descent engines at altitude, and there was nothing there. We informed NASA of what was needed for site activation, and the Corps of Engineers then designed it, leaving the clarifying criteria to us and the contractors we chose. That's how the site activation work began—with definition of our criteria for design, construction, and installation. By mid-April, 1965, with some 300 people on site, we had our first test firing.

"It was a dangerous job because we used hypergolic fuels — that is, fuels that ignite upon contact. But it was done, and we did it safely. We chalked up 22,000 seconds of firing time."

At Houston, danger also lurked, for it was there that the critical LTA-8 (Lunar Test Article) underwent manned vacuum-chamber tests. There LM became man-rated as astronauts and Grumman consulting pilots proved the chamber—a pressurized simulated LM space flight vehicle—to be safe for a flight to the moon and back. It was proved safe for the flight environments, extreme cold and extreme heat.

While all this was going on, KSC was not dormant. A Grummanite (Larry Cervellino) became on-site representative in 1963, and a small buildup got under way in '64. Site activation on a

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See operational savvy gained on LM as vital in Shuttle bid

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broad scale came in '65, and the first phase of operations mushroomed in the following two years when about 1,400 Grumman people were at KSC.

The work at KSC differed from LM activity at Bethpage. As the tested and checked-out LMs at Bethpage were flown to KSC for retest and checkout, a new world opened. LM was the center of attention for Grumman . . . but only one part of the vast and complicated Apollo Program. As such, for example, LM had to be stacked on the booster, and it had to be serviced with the "hot stuff," the hypergolics. The enormous task of integration of all the varied launch teams had to be accomplished as the fully-mated Apollo moved from

"A man's legs are forty times longer than they were a generation ago, measured by his increased speed and mobility. He has developed more potential energy during the past twenty-five years than during the previous twenty-five hundred years. And the rate of acceleration continues to increase, a specific reflection of the fact that the number of scientists now alive is larger than all the scientists in all the ages put together before 1920."

—Norman Cousins

the stackup at the VAB (Vehicle Assembly Building) to the launch pad, where the countdowns occurred. About 1,400 Grumman people were there in '69 when three Apollos were in flow.

That KSC checkout team became superb; and the Lunar Module may have hit its most electrifying space venture as it served as the "lifeboat" for the aborted Apollo 13 mission.

The LMs have been virtually flawless.

'Talent unsurpassed'

Grumman Director of LM Operations Wiley Williams, previously the Mercury and Gemini Test and Checkout manager for NASA at KSC, commented that "The talent and expertise of the Grumman launch team is unsurpassed. Their accomplishment of a perfect record is a tribute to Grumman. Concern for a successful Apollo 16, and later an Apollo 17, mission is paramount in our minds.

"We're keyed up to a point that success is our motive, and we will complete the Apollo program with our heads held high. The Grumman launch team has made its mark. It has achieved an excellent reputation both within the Company and with the customer."

"It's this large bank of experience that's now being applied to the Space Shuttle Program," comments Senior Vice President Joe Gavin, chief of the Company's space programs.

And Vice President Jack Buxton, who directs Grumman's efforts at MSC, emphasizes the point and its values:

"For the most part, we still have here the team that but a few years ago worked on the manned vacuum-chamber tests for LTA-8. We have a well-rounded systems capability, one of great flexibility."

He points out, too, that the Company has a large manufacturing prototype shop at MSC, one that no other contractor can rival. The shop can turn out prototype and training devices—on a fast-response basis. Some 80 or more people, with many diverse skills, make up the shop, which Buxton calls a "microminiature Bethpage" because of the tasks it can handle.

New site activation

Of great value, too, is the fine rapport between Grumman and the customer, NASA, developed over almost a decade of interfacing. The communications lines are open, free; both NASA and Grumman are aware and responsive to the other's problems and needs.

As for the possibility that the Shuttle effort may lead to activation of new sites—say at Michoud, La., where the Saturn is built, or at the Mississippi Test Facility—Standefer sees no problems: "The Company's done it before. We can do it again — and do it better."

The focus of attention at the Cape has to be on LMs 11 and 12. That has to be the case from now until sometime in December, when the last of the Lunar Modules is to fly moonward.

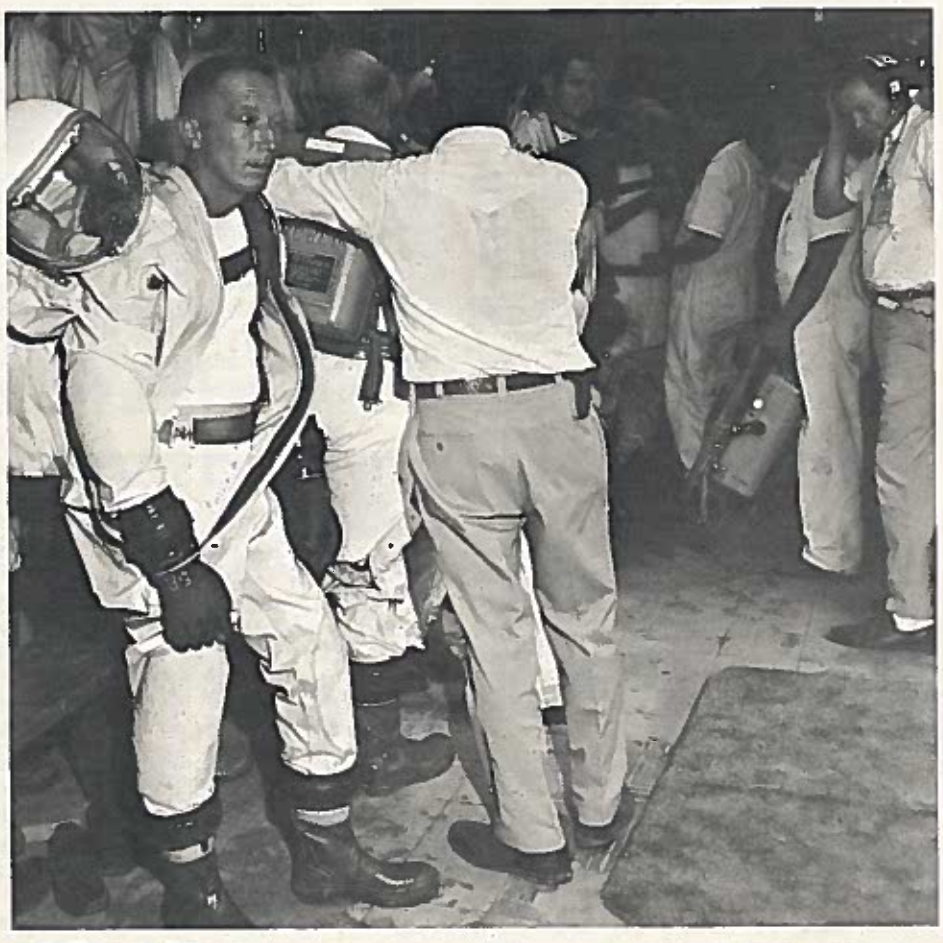
This does not mean, however, that thought of the Shuttle can start only after LM 12 has left the pad. Lee Yager and Ed Barron in Advanced Programs are working on the Shuttle now. "From our operational experience here, we've been able to aid in the design of the Shuttle. For instance, because of our knowledge of the VAB, two cranes—not one—will be needed to handle the combined Orbiter and tank," says Barron. "Also, we've commented on the location of the quick-disconnects: They must be made simply, easily, and in close proximity to the launch tower."

In a sense, then, it is at the operational level at KSC that the design level is checked in Bethpage. As Barron says, "There's a terrific feed-back loop on the Shuttle Program. There has to be."

Of equal (if not more) importance are some thoughts expressed by Lee Yager, head of Advanced Programs, who believes that though the basic way of doing things on Apollo is sound, there will be changes:

"In the first place, we're going to have to re-orient our thinking. With Apollo, cost was not the primary point. The whole vehicle was expendable. That's not the case with the Space Shuttle. The theme of the Shuttle is economy, and to conform to that we have to think in terms of reusability. We also have to keep our eye on maintainability for the Orbiter, for each vehicle should have a 10-year life eventually and be able to fly much as an aircraft does today. This means replaceable units and design redundancy, similar to aircraft. It'll mean low operational costs and rapid turn-around capability. It'll mean improved thermal-protection systems. It'll mean all these things and more, even though Apollo and Shuttle are in many ways quite similar."

Barron said, too, that operations had to flow faster and in a surer way, and he mentioned as examples propellant loading and checkout procedures. "In the case of LM," he said, "it takes a day to load a few thousand pounds of hypergolic fuels; with the Shuttle, it should take about two hours to load more than a million pounds of fuel. As for checkout procedures, instead of pushing buttons manually, as on Apollo, we should start it up and let it go automatically—even doing checkout, servicing, and trouble-shooting. That way we need only three people instead of 45 people per shift. Things can be checked out in sequence at the subsystem level and interface with a data bus that's wired to a particular system, such as attitude control or main propulsion. All of it comes down to software—man's brain programming on a repetitive tape. Once correctly programmed, it's errorless."



It'll suit him. **Hans Grabbe of Fluid/Mechanical GSE stands by in Self-Contained Atmospheric Protection Ensemble (SCAPE) suit, letting his helmet dangle in blase fashion, before getting into the hazardous task of loading hypergolic propellants.**

Another dimension

Yager added another dimension, "the need for management to have the data on which to make decisions. In brief, "How do I know that if I launch this vehicle again I can be as sure as I was the first time?' The programming resolves that issue."

If you try to capsulize all this it may come down to the question: Can Grumman provide operational support for the Space Shuttle at its field sites? Chuck Kroupa, the man in charge of Grumman's KSC team, has no doubt about it. He says:

"We possess a wide variety of skills that are directly applicable to the Space Shuttle Program. . . . Through the years, our personnel have developed, grown, and matured. They appreciate the need for 'meticulous attention to detail.' They've attained tremendous expertise and quality, a detailed knowledge of spacecraft systems, an acceptance of the rigid requirements for checkout, the need for planning in detail, tight scheduling, and the urgency of doing the job on time—and doing it right the first time so time and money aren't wasted.

"They know how to work with all the contractors, the need to stay in step, and to perform his or her job well.

"We're ready, with all the needed skills, when we win the Orbiter. In the meantime, we're concentrating on our prime responsibility—LM. We're fully aware that Apollo missions 16 and 17 are very crucial. Our morale is excellent, in large measure because, though we're 1,200 miles from home base, we know we enjoy the continuing backing and interest of our Company officials."

And getting better

And Kroupa added:

"When Grumman wins the Shuttle award we'll need all of the operational expertise we can get our hands on. Even though that's downstream, it has to be cranked in from day one, especially in the design stages and Grumman Support Equipment, site activation facilities planning, operations planning, and so on. We know, too, that we need a management information system second to none. And as far as I'm concerned, everybody on the Shuttle will have to learn to do more with less, live with it, and make it stick. There's one hell of a tight management and technical team on Apollo—and it has to be better on the Shuttle. We'll do it."

Product Configuration Audit. Reviewing agenda for F-14 PCA by NavAir are (L to R) Ed Merriam, F-14 Configuration Data manager; Jim Bryant, F-14 Configuration manager, NavAir; Capt. Dick Martin, F-14 deputy director for Air Vehicle; Joe Rees, F-14 deputy Program director; Ed Hantz, Corporate Configuration Data manager, meeting last week in Plant 1. (Photo by Fred Annette)

Navy, Grumman huddle on F-14 to document design of systems

An audit of F-14 systems and airframe hardware has been taking place at Bethpage and Calverton, March 13-24, to make sure that the F-14 systems and hardware match documentation, drawings, and work sheets to the satisfaction of the Navy. Ed Merriam, who is F-14 Configuration Data manager, and Jim Bryant, F-14 Configuration manager for NavAir, are co-chairmen, representing Grumman and the Navy respectively. The team meetings have been held in Plants 1 and 36, as well as Calverton.

Airframe type of equipment—for example, avionics systems, or the automatic flight control system—are subjected to scrutiny to certify that the approved designs, as defined by Design Control specifications, are accurately expressed by engineering drawings and represented by the hardware. The audit was in the hands of two teams: an End Item Review Team, and a Documentation Review Team. About 25 Navy and Grumman people comprised the two groups.

This is the first time such an audit has been held at Grumman Aerospace, "and it has proved very beneficial both to the Navy and to Grumman," according to Jim Bryant, NavAir chairman.

KSC team readying LM . . .

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nature of these large-energy high-velocity particles; so far, we know little more than that they come from outside our solar system. Yet there's a chance that in a deeper study we may run across new elements.

These two experiments are really a small part of what will be done on the moon by astronauts Young and Duke. They'll be carrying out heat-flow, passive seismic, active seismic, solar wind, soil mechanics, and lunar geology experiments, among others; and they'll be examining craters, the Cayley Plains, and the Descartes formation, which in all likelihood is made up of igneous rock basalt. (Basalt is rock that has come from a lava flow.)

There will be ample time—seven hours per man in three separate EVAs (Extra-Vehicular Activities)—for the astronauts to sample the different types of rocks and soil in the region for, once again, they'll be able to use the LRV (Lunar Roving Vehicle).

Not to be forgotten is the man "upstairs," Lt. Col. Ken Mattingly, Command Module pilot, who gets less publicity but more mileage. While one of his jobs—and it's an important one—is taking photographs, that is hardly his sole duty. He, like the moon-walkers, has experiments to perform during his three days of lunar orbit. One of those involves the laser altimeter. Basically, light pulses travel from the CSM and are reflected back to a detector. Since the speed of light is known, the distance between the CSM and the moon can be established; then, too, the CSM's position is known. By merging the information, the elevation of the lunar surface can be deduced—within three or four feet!

In addition, there's a "chemical" group of experiments that's directly related to discovering the composition of the moon's surface; a mass spectrometer experiment to measure the composition and density of gas molecules in the flight path; an S-band transponder to measure small variations in the moon's gravity; and, among other things, a subsatellite to measure particles and magnetic fields.

There will be more than enough to do—as has been the case with all of the Apollo missions. From April 16 liftoff to lunar landing on the 20th to lunar liftoff on the 23rd and splashdown in the Pacific on the 28th, the astronauts are going to be busy, busy people.

'Boomers' busy on line tour with 'Connie'

Intruder veteran, Lt. Jay Grafton, gets 'welcome aboard' from Field Service rep George Johnson after logging 1000th flight hour in A-6.

Things have been pretty active for the "Boomers" of VA-165 since they've been on station in the Western Pacific with the carrier Constellation, reports Grumman Field Service rep George Johnson. Lt. Cdr. Jay Grafton returned from a combat mission in Southeast Asia recently, and soon as he hit the deck, Johnson was on hand to congratulate him for racking up his 1000th flight hour in the Grumman A-6 Intruder.

About the same time Cdr. Jim Seely, executive officer of VA-165, completed his 350th combat mission over Southeast Asia. That's quite a feat — especially when compiled in only one combat zone. Commander Seely is now flying the all-weather A-6, but on earlier cruises in the area he has flown the A-4 Skyhawk. The "exec" has flown lead aircraft against some of the most heavily defended targets in the history of air warfare along the Ho Chi Minh trail in both North Vietnam and Laos.

And the "Boomer" KA-6D tankers are contributing their share to a successful line period for the squadron. The tankers have transferred over one million gallons of jet fuel in less than four line periods. Fighter combat air patrols that guard the task force from possible intrusion by hostile aircraft depend heavily on the KA-6Ds; without them, their time "on station" would be drastically reduced.

They're all heart

The Suffolk Heart Association is presenting a talk this evening, March 24, in the Hauppauge High School, by Dr. Paul Dudley White, world renowned heart specialist, on "The Causes and Prevention of Heart Disease." Richard Cope of Machine Operations - Technical Service, Plant 6, will also speak. He is Long Island's heart transplant survivor, "the man of 45 with the 18-year-old-heart."

The Huntington Thunderers, national champion marching band, will provide entertainment preceding the speakers. Admission is $1. Time: 8 p.m.

Tips and fees

John Conover of Corporate Suggestions got a thank-you note recently from Al Sposato, acting superintendent of the Connetquot Central School District No. 7, for his aid in helping set up a suggestion system in the district. In his letter, Sposato states that "education has much to learn from business management, and the sharing of your successful program is a fine example of the cooperation that should exist between industry and education. . . . "

And a note from the L.I. State Park Commission reminds golfers that the three nine-hole courses at Sunken Meadow State Park will be reopened for the season April 1. The pitch-and-putt courses at Jones Beach and Robert Moses State Parks will also open for play April 1.

Quality citation

James Schmid of Quality Control at Kennedy Space Center, Plant 83, was honored at a dinner in Cocoa Beach last month for completing all the requirements to become an "ASQC-Certified Quality Engineer." The chairman of Cape Canaveral American Society for Quality Control, James R. Johns, listed some of the qualifications that elevated Schmid to the honor: Eight years of experience, or part experience and part college and graduate work, in one or more branches of Quality Control, plus the passing of a written examination on (a) fundamentals and principles and (b) questions on applications of these principles. A candidate is said to spend approximately 200 hours in classroom or in self-directed study.

Being a QA supervisor at KSC is a high responsibility. Schmid was one of nine honored at the dinner, and he now has a framed certificate attesting to his success in the Quality field.

Calling Eagle scouts

Are you there? The Suffolk Eagle Scout Association is looking for former Eagle Scouts to join the Boy Scout Council and give their support to programs in advanced scouting, including merit badge activities. Nearly 100 members have been enrolled, and if you would like to help the Suffolk Council, get a membership application from the County Council office, Stony Brook, 11790. Henry Pleim, Drafting, Plant 5 trailers, Ext. 86319, is secretary.

'Super fun.' Fred Hamada photographed by SCUBA diver Howie Soloff (both of Product Support, Plant 15), meets friendly tropical tortoise (L). Grumman Widgeon was 'rescue ship' when hurricane stranded SCUBA group on Glover's Reef.

Hamada's view under the sea: 'Strange and beautiful world'

A short conversation with Fred Hamada of Product Support Systems Analysis, Plant 15, is almost certain to turn to the subject of SCUBA-diving, Hamada's favorite diversion and hang-up. Locally, he goes spear fishing and night diving in such Long Island areas as Moriches, Port Jefferson, Shinnecock, and Glen Cove. But Hamada's idea of "super-fun" is to invest in a week or so of diving in tropical waters. Last Thanksgiving he joined a group who spent nine days on and off Glover's Reef, outside the Great Barrier Reef, British Honduras, "and the fishing in one week, with line and spear, was what you'd get in maybe a year on Long Island." The next big trip will be back there over Labor Day, and to Rowatan, in Spanish Honduras, for Thanksgiving.

Hamada says he got fired up on SCUBA-diving reading National Geographic Magazine articles about that other world of undersea exploration. When he was transferred to LM GSE Engineering at Kennedy Space Center for a couple of years, 1967-69, he had a golden opportunity to join a SCUBA (Self Contained Underwater Breathing Apparatus) club and learn the fundamentals in the warm waters of the Bahamas.

Quiet world

"How does it feel down there with your mask and tank?"

"Like you're in a world by yourself," Fred replies. "Quiet. You look around, study the marine life, collect shells, spear fish if you want — or net little tropical specimens for your aquarium back home. I enjoy taking pictures. I have a Nikonos underwater camera and so I get a special pleasure out of my original hobby, photography."

"What is involved in qualifying for SCUBA-diving?"

"I'd say the first requisite is: take a course and get nationally recognized certification," Hamada said. "Many dive shops and schools give certification courses. Then, if you want to just try out the diving, you can rent equipment. Mask, fins, snorkel, tank, regulator, back pack, weight belt, and knife are essentials and proably cost, to buy, around $200. To round it out, you'd want a wet suit, depth gage, compass, decompression meter, sea view gage, and whatever else fits in with your interests: lobster bag, spear, camera, lights, net, safety line. (The professional lobster fishermen, of course, object to people making inroads on their stock of lobsters. But in the tropical waters, there are many to be had and they make delicious eating.)

"Now keep in mind we're talking about SCUBA-diving, where you carry your supply of air in a tank on your back," Hamada pointed out. "Skin diving is different; it requires only a mask, fins, and a snorkel. With your compressed air supply, you have more freedom; you can go to a depth of 10 feet for perhaps 90 minutes, or to 200 feet for five to 10 minutes, depending on your rate of breathing and depth. You can explore caves and wrecks and lovely coral formations, and meet strange and beautiful marine life of all kinds. The fish to be had in tropical waters include barracuda, snapper, grouper, and bonefish, plus crabs and lobsters. Wonderful sport."

On a nine-day "super-trip" last Thanksgiving, Hamada and 15 others, most of whom he'd met on KSC diving outings, flew to Belize in British Honduras, Central America, and had some unscheduled adventures with a hurricane named Laura. They spent their first day there on land, exploring the Altun Ha Mayan ruins in the interior northwest of Belize. Then, because the sea was so rough that no commercial boats would take the group to their destination on Glover's Reef, they were able, through the German consulate, to get the use of a 45-foot charter boat.

Run aground

The hurricane kept on roaring and before they could reach their destination, the boat ran aground in the darkness and there it stayed, hung up on the edge of Glover's Reef, all night.

In the morning some diving was in order to survey the damage to the boat. Temporary repairs were made and the group finally reached camp, only to discover that a scientific party from the Smithsonian Institution, there to study Glover's Reef, had just departed because of the weather.

Fred and his friends, undaunted, had a busy week, diving and fishing and taking photographs.

The story has an unexpected twist. They couldn't get a boat to take them off. "'We finally made contact with Southerland Air Charter Service to airlift our team off the atoll, back to Belize," said Hamada. "To my complete surprise, the rescue craft proved to be a Grumman Widgeon, vintage 1945—the only amphibian in British Honduras. It took four trips to get us out, four at a time, without a mishap."

Hamada will be calling a meeting to re-activate Grumman's SCUBA-diving club on Wednesday, April 5, at 5 p.m., Conference Room A, Plant 15, and if you're interested, phone him on Ext. 87310 or 87331.

Hamada joined Grumman as a mechanical engineer in Product Support in 1966. That was when Grumman was holding Open House for prospective employees, "and I just walked in on my way to work at Fairchild-Hiller." He's a graduate of Clarkson Institute of Technology in Potsdam, N. Y., had a stint in the Army, and worked for Hamilton Standard and Fairchild-Hiller before coming to Grumman. He has a brown belt in judo.

His special word to would-be SCUBA divers: "Take a course to get certified, be a safe diver, and never dive alone. And I'd like to see more people at Grumman enjoying the strange and beautiful world of the tropic seas. There's nothing to equal it."

Puleeze! Keep off runway

A straight line may not always be the shortest route between two points. Take the runway that runs between Plant 4 and Plant 2. That's probably the most inviting shortcut between plants at Bethpage, but inviting as it is, that shortcut could prove to be the longest way home for someone some day.

Walt Berndt, airport manager at Bethpage, cautions Grummanites that using the runway as a shortcut—day or night—could prove disastrous. Company vehicles that use the runway for flight operations, repairs, cleaning, etc., have to follow stringent safety rules; Tower Operations gives them clearance when there is no danger from incoming or outgoing flights.

One of the most dangerous times for vehicular traffic, Berndt says, is after dark when the tower is not manned. During that period, the red caution light is always on to prohibit vehicular traffic (or walkers) from using the runway as a shortcut.

But there are times when drivers assume that there will be no flight traffic because it is night and the tower is not manned. **That could be a fatal mistake,** Berndt warns. Occasionally visiting aircraft drop in after dusk, and sometimes other planes land at Bethpage in emergencies. Should a vehicle be crossing the runway during these times, it could prove disastrous to the driver and passengers in the vehicle, and to the occupants of the plane, as well. And because of the proximity of buildings and parking lots, an accident might cause further fire and destruction to Company and private property, as well.

"Please observe airport safety rules," says Berndt. "Don't use the runway as a shortcut at any time—it could be the longest shortcut you ever took."

Named to post

Charlie Dunn has been named Small Business Liaison officer, responsible for the activities of the GAC Small Business Office, including efforts relating to the Minority Business Enterprises Program and Labor Surplus areas. He reports to Bill Paxson, director of Procurement Operations. His office is in Plant 30, Ext 1825.

Some forms!

If you have occasion to order "G" forms for your office or department, you are affected by the following change in method of ordering them.

The "Standard Stationery Materials 30 Catalog" is being revised to contain three new pages listing a selected number of general purpose "G" forms, according to Paul Holm, Office Supply administrator, Plant 30. Such a list will include "At Your Service G 1956 Rev. 1," "AVO pad G 198 Rev. 3," "Employees Suggestion G 799 Rev. 1," "Interoffice Memorandum G 116 B Rev. 5."

"If you are on the distribution list for this catalog, you will be notified automatically by the issuance of a revised catalog containing the new listing and the effective date of change," Holm said.

"If you have a need to order 'G' forms, and are **not** on the catalog distribution list, please call me in Department 181, Ext. 6187."

The responsibility for creating new "G" forms, changes, and deletions will remain the responsibility of Corporate Forms Management, under the cognizance of Bob Sanginario, Plant 30, Department 792, Ext. 9172.

Ice tickets

Peggy Fleming is coming to the Nassau County Coliseum with Shipstads and Johnson's Ice Follies. They will be there from April 12 through the 23rd. You can pick up your discount tickets at Employee Services offices.

Family day at Point Mugu

Almost 8,000 people, including more than 200 Grummanites and their guests, gathered one recent Sunday at the Navy's Point Mugu facility to get a close, hard look at Tomcat, the new air superiority fighter.

The idea for this Family Day came from Tom Brancati, Grumman's base manager at Mugu. And what he had in mind was something deeper than a simple stroll past the four Tomcats and a test article in the hangar. He wanted to have the families of F-14 personnel play a supportive role, to understand why Grummanites worked those long hours that sometimes disrupted the dinner hour.

Then, too, Brancati believes that only by seeing the job at first hand can a family appreciate what's going on. Words alone are not enough.

In addition to the look-see, Navy, Grumman, and Hughes families saw progress films of Tomcat, and the children got a train ride and packets containing special treats.

This Joe D real 'hummer'

The year began well for Joe De Prima of Field Service Product Support, the Inventory Control manager for the E-2B Hawkeye aboard the aircraft carrier USS Independence.

The men of VAW-122 presented Joe (below R) with plaque and certificate proclaiming him as an honorary "Hummer" (member of the Hawkeye) and "Crab," (civilian type) of the year. Presiding at the award ceremony was Cdr. Walt Hogan, commanding officer. In addition to his Hawkeye labors, he pitched in to help with A-6As and KA-6Ds of VA-65. Busy man!

Four Tomcats make a cover . . .

Four of Grumman's Tomcats in a hangar at Plant 7, Calverton, serve as a study for photographer Gerry Costello, using a fish-eye lens, during a rare lull in flight-development activity.

The F-14 has been proceeding well—215 flights and 493.3 flight-hours, and almost seven hours and 45 minutes of that time in supersonic flight. This excludes flights and flight-hours for Tomcat No. 4, which has been bailed to Hughes.

The record is impressive. Aircraft flights, and flight-hours stack up this way: 1-X, 54-141.9; 2, 81-186.3; 3, 15-25.1; 5, 23-50.9; 6, 10-22.9; 8, 17-36.0; 9, 7-18.7; 10, 2-3.5; and 11, 4-7.4.

GAA slates fun 'n' sun flight to Canary Is.; sign-up April 18

September in the Canary Islands? Swimming and sunning, dancing and dining and exploring. Is that for you?

A charter flight on a Pan American Boeing 707 will get you there and bring you back, Thursday, September 14, to Sunday, September 24, for $325. Destination: Hotel Parque Tropical, Las Palmas, Grand Canary. Arrangements made by the Grumman Athletic Association include round trip jet flight, twin-bedded room - double occupancy, two meals a day, transfers between airport and hotel, and gratuities—all for $325.

Since this is a charter flight, IATA regulations restrict eligibility to Grumman employees and retired personnel, spouse, dependent children and parents living in the same household. Employees must accompany relatives.

Parque Tropical is a beach-front hotel, with swimming pool and tennis courts. Once you arrive there you can settle into a beach chair, or you can go exploring. Optional trips include half-day or day excursions to the other Canary Islands or to El Aaiun, on the west coast of Africa.

Reservations for the trip will be accepted Tuesday, April 18, at 5:30 p.m., Plant 28 waiting room. Names will be drawn to determine order of sign-up, and you must be there in person. Full payment of $325 is required. Passport forms will be distributed. Checks should be made out to Bethpage Aircraft Tour Club.

The cancellation date is July 5. Full refund will be made if a reservation is cancelled before this date. After July 5, refund of flight cost will be made only if an eligible replacement is available.

Six vacation days are required.

A meeting will be held about two weeks before departure, when tickets will be distributed and final details of the tour discussed. Meantime, if you have questions, call GAA, Ext. 2133.

Nassau clinics start program to detect Sickle Cell disease

A screening program to detect Sickle Cell disease, a hereditary condition that afflicts about 10 percent of the black population in the U.S., has been established at a number of Nassau County Health Department clinics and local hospitals.

The Sickle Cell phenomenon is found in persons who possess S Hemoglobin in the blood. In such persons, the ability of the blood to transport oxygen is much reduced and there is a tendency for the red blood cells to form sickle or crescent shapes, thus stopping up the smaller blood vessels. A person with Sickle Cell disease is chronically ill with a much shortened life expectancy, and usually exhibits symptoms of anemia such as pain and swelling of some organs, ulceration of the ankles, abdominal pains, etc.

Carriers of the disease are not affected by the obvious symptoms of Sickle Cell, and may lead perfectly normal lives providing they avoid oxygen-depleting situations — too vigorous exercise, unpressured aircraft, SCUBA diving, and general anesthesia.

Ongoing research

There is no known cure for Sickle Cell disease, although there is much research in the field. In the meantime, various agencies and people are concerned with educating the population about this disease, screening persons to uncover and inform all trait bearers, and providing counselling where it is indicated.

The Nassau County Health Department has introduced a screening program into all its pediatric and child health clinics for registrants of those clinics. The physical examination of the child may include a test for Sickle Cell Anemia.

For additional information, please call: Freeport Health Center, 378-7310; Elmont Health Center; 354-3604; Plainview Health Center, 420-5200; Hempstead Health Center, 538-2800; Mercy Hospital, 764-4400; Oyster Bay VNA, 922-6611; Long Beach Hospital, 432-8000.

The following hospitals have Sickle Cell Anemia activities either for screening or diagnosis and treatment:

Doctors Hospital, Freeport, 378-8500; Nassau County Medical Center, East Meadow, 542-2355; Community Hospital, Glen Cove, 676-5000; Long Island Jewish Medical Center, New Hyde Park, 437-6500; North Shore Hospital, Manhasset, 562-2411.

CALENDAR of events

Notice of events for period Apr. 14 - Apr. 28 should reach Plane News by Tues. Apr. 4.

Chess Club: Tues., 5 p.m.. Plt. 3 Cafe, tournament, games. Alex Ikonnikow, Ext. 7592.

Coin Club: Every Wed., 12:05 p.m., Plt. 25 Vendor Conf. Rms. Ken Hale, Ext. 3395.

Duplicate Bridge Club: Every Thursday, 5:45 p.m., Plt. 3 cafe. S. Stone, Ext. 3652.

Eng. Mod. Soc.: Wed., Apr. 12, 5:30 p.m., Roman Gardens, Plainview, bus. mtg. Harvey Knopf, Ext. 7944.

Ex-Servicemen's Club: Wed., Apr. 5, 7:30 p.m., Plt. 28 audit., reg. mo. mtg; Wed., March 29, 7 p.m., Northport Vets Hospital Rec. Hall, entertainment & dance for patients, all invited. Al Korduta, Ext. 87259.

Family Campers: Sun., Apr. 9, 5 p.m., Plt. 18, gen'l. mtg. Bill Lord, Ext. 2914.

Fenc. Club: Mondays, 5-7 p.m., Plt. 30 cafe, instr. in fenc./competition. A. Chomas, Ext. 1926.

Fly. Club: Fri., Apr. 14, 5 p.m., Plt. 28 audit., reg. mtg. Stan Kalemaris, Ext. 7341.

GAA Divers: Wed., Apr. 5, Plt. 15 Conf. Rm. A, reactivation of SCUBA divers. Fred Hamada, Ext. 87310.

Inst. Soc. of America: Tues., March 28, 5:30 p.m., Edelweiss Rest., W. Babylon, cocktails, dinner, lecture, spkr. Dr. S. Y. Lee, Pres. of Setra Sys., Inc., on "Latest Develop. in Min. Capacitance Type Pressure Transducers." Ed Conroy, Ext. 9515.

Retiree Club: Wed., March 29, 1:30 p.m., Holiday Manor, reg. mtg., spkr. Walter Carpenter, Cooperative Ext. Assoc. of Nassau County on "Gardening." GAA, Ext. 2133.

Ski Club: Wed., March 29, 8 p.m., Holiday Manor Hicksville Rd., Bethpage. Bill Flynn, Ext. 1823.

Kosse on Food Services:

We're not asked to make a profit . . . we want only to break even . . .

"We make enough soup in a year to fill the swimming pool at Jones Beach," says Dick Kosse, director of Grumman's $4 million Food Services business. Soup has long been one of the cafeterias' main attractions, and it never comes out of a can (nor goes into a swimming pool, either, for that matter). "There are foods we buy prepared and frozen from outside sources, but the soups we serve (and gravies and pies and cheesecake) are made right here in Plant 2 Commissary," Kosse said in an interview the other day.

Kosse is the unflappable director of Food Services for all the Company's Long Island plants and a consultant to the Savannah, Glen Arm, and Sterling plants. He holds a bachelor's degree from the School of Hotel Management at Cornell University and a Master of Business Administration from Adelphi University, and has been with Grumman 15 years.

What's for lunch? Food Services Director Dick Kosse checks menu with Rose Covais, North Buffeteria manager, Plant 2. (Photos by Bob Settles)

Q: Some people think your prices are too high. Do you make a big profit with your "captive" clientele?

DK: Our goal is only to break even. The Company doesn't ask us to make a profit. We ARE a business, though; our rules are just different from an outside restaurant. We buy, manufacture, sell, and generate income, but we are a service organization. We make up a budget every year and have to live by it, and in fact I'm right now working on a five-year budget.

Q: With so many predictable customers, why can't you undersell outside restaurants?

DK: Customers are never predictable when it comes to eating. They'll ask you today to put roast beef sandwiches in the vending machine and tomorrow they'll want bologna. Seriously, we have to take in most of our money in about two hours at peak periods, mostly on the noon whistle rush, five days a week. Our night shift operations lose money. Then, too, our employees—your fellow Grummanites—are paid a higher rate than personnel in public restaurants and that adds to the overhead. And of course we don't have the ordinary subsidies of tipping and the sale of alcoholic beverages to bolster our income.

But to answer the question: Our pricing policy is governed strictly by our budgetary commitments; if raw materials and overhead costs increase to a point where the prices we charge don't allow us to make enough money to break even, we must raise our prices to the break-even goal.

There are no outside restaurants that can match us on an item-per-item basis. Another restaurant may feature a cheaper special, but across the board, we are lower. And we are clean. We are regularly inspected and we maintain the highest standards of cleanliness.

Varied dispensers

Q: You mention machines. Are they part of your Food Service operation?

DK: Yes. We meet three kinds of eating needs in the Long Island plants. We have cafeterias in 10 plants, buffeterias in eight, and vending machines in most other plants. Two buffeterias in Plant 2—one at each end—proved more convenient for that plant than one cafeteria in the separate building, which is still our Commissary headquarters. We introduced the first buffeterias into Plants 2 and 7 in 1967 and they seem to meet the desire for quick but personalized service. And from our standpoint they

Dick Kosse
Heads $4 million business

are good, too, because they have increased per capita sales.

Q: What IS the per capita sale, do you estimate?

DK: For lunch, 53 cents. And that brings up another little increment for us. We recently changed from cafeteria tickets to an entirely cash basis, which has proved to be good for our business. The occasional customer is more likely to part with 53 cents, or 10, or 25 if he can pay it out when the spirit moves him than he would to buy a dollar book of tickets that would lie around unused for some time.

Q: Wasn't the sales tax the reason for changing from tickets to cash?

DK: Well, yes, that was the main reason. We found, however, that we had an anomaly in Plant 1: a cafeteria where tickets were required and a buffeteria in the same plant accepting cash.

Complaints, complaints

Q: Do you get a lot of complaints about the rolls being stale or the lettuce wilted?

DK: There are always complaints, but we try to correct the situation if we can, with replacements or refunds. We rely on our people to let us know how we're doing. Unless we hear, we assume everything is going well. The local Food Service managers are readily available, or call Ext. 3581 if you have a complaint. The number to call for vending machine breakdowns is Ext. 84217.

Now the mechanisms in the vending machines are finely tuned, and we do keep a staff of mechanics busy repairing them. We have trouble with Canadian coins and with slight burrs on some of the new American coins. These the complex change mechanism won't accept. Usually you'll find one of our staff in the vending machine area to return your lost coins or take care of your complaint.

Q: How is Grumman Food Services operated?

DK: Jack Paras, a 14-year man, is supervisor of vending operations. He's a leading vending authority in the East, and he has his own special merchandising problems. (He's another one who says people are unpredictable.) Hot foods, he points out, present a problem because they are never kept beyond the so-called "feeding period." So he must choose items that have good turnover, that are popular. Cold foods are maintained at 42 degrees but are not kept, even though refrigerated, longer than 24 hours. You can understand that complaints can arise when a customer gets something at the end of its useful life rather than at the beginning.

Q: Who else is on your staff?

DK: Tommy Thompson is in charge of the buffeterias. Dick Lindstrom supervises the cafeterias but is also in charge of all food services. Bob Boyd is deputy director of Food Services and he works with me. You can imagine that forecasting and buying and merchandising and transporting these many kinds of food in a $4 million operation requires a lot of talent. We find that some of our suppliers are not always dependable these days; you might get beautiful rolls one day and an underdone batch the next.

Q: Would you like to comment on your Food Services staff?

DK: We have a cadre of experienced old-time professional people who have been with us for many years and who have unselfishly shared their skills and knowledge with the younger people. Consequently, we're enjoying the benefits of this in-house training program with an excellent group of people in all levels of food preparation and management in the organization. We feel we have really demonstrated hiring and training from within.

Why a cafeteria?

Q: Why is there a cafeteria, anyhow? Woudn't it be less expensive for Grumman to let everyone bring their own food, or buy it on the outside?

DK: There aren't enough places around here to feed everyone, and going out takes time and effort. Grumman feels it has an obligation to its employees to provide fast service and clean food at reasonable cost. We feed about 12,000 people at lunch.

Q: There are some complaints about the price of cigarettes in the vending machines. Couldn't you give your customers a price break there?

DK: The Corporation feels they'd rather charge the going price for items sold in the vending machines and use the surplus to help hold food prices lower. Or to put it another way, the food function is more important.

Q: Food Services takes care of the Christmas turkeys for all Grumman employees?

DK: Yes, we buy them on a bid basis. The best ones we've had come from the San Joaquin Valley in California, and that's where we get the Grumman ones. We find the best chickens, however, come from Maine, and we have to pay as much as four cents a pound more for them than for Carolina-grown ones. We buy our meat from the major packers: Swift, Armour, Wilson, on a bid system: a fixed override on the U.S. Department of Agriculture published price list.

Q: You put on a special Thanksgiving dinner in the Grumman cafeterias last fall. Will you do that again?

DK: Oh, yes, I think so. It's almost a "Grumman institution" by now.

We like to try to keep everyone happy and we welcome comments. Like the hot buttered bagels in the vending machines, new ideas in breakfast or lunch menus are always a possibility.

If you haven't eaten in a Grumman cafeteria in a while, try us out, and let us know what you think.

They started something that's really catching on!

Talented ones. Jake Bussolini, director of Administrative Operations, presents Project Sterling group citation to Evelyn Doherty, supervisor of Word Processing Center, Plant 5, and to (L to R) Marilyn Kozyra, Ellen West, Marilyn Schmitt, May Sammon, Frederica Post, Carol Hubbell, Joy Curry, Amy Musco, Charlene Russert, Fran Lyons of Engineering Administration, and Judy Silverman. (Photos by Jim Wagner)

A Word Processing Center sounds like a euphemism for "typing pool." But after taking a short course in the one located in Plant 5, WPC could be more realistically defined as "a system used to expedite volume typing on a quick-response basis and at a reduction in cost."

The department, headed by Evelyn Doherty, started out with just five typists and two MT/STs (Magnetic Tape Selector Typewriters) all directed towards increasing productivity and the elimination of retyping and re-proofreading of Corporate documents. They were so successful that they now have 11 highly skilled typists who are trained in the use of computerized typewriters, and by the end of the month they will have added two Magnetic Card machines and a Composer System.

Fast, accurate. Words come flying out of Magnetic Tape Selector Typewriter, one of two that helped earn award for Word Processing Center.

Cuts down re-typing

These machines eliminate the time consuming job of re-typing. "When we're given a job to type, we type it on the MT/ST or Mag Card. Everything typed on the MT/ST is recorded on magnetic tape and what is typed on the Mag Card machine is recorded on magnetic cards," explains Evelyn. "The engineer is given his rough draft back, he proof reads it against the typed copy, and makes any corrections necessary. When we get the corrected copy back for final typing, all we do is make these corrections on the magnetic tape or cards, then play it out on our computer system."

The engineer receives his final copy a lot quicker, and he is spared the time that it would take to proofread the entire document again. All he proofreads are his corrections. MT/ST can also be used to generate original form letters by playing the tape over and over again, with different addresses and salutations added. Once the tape or card is no longer needed it can be erased and reused.

If a weekly status report is involved, or any document that will be sent out weekly or monthly, the MT/ST is used; smaller jobs are recorded on the Mag Cards. "We keep the tape on file for as long as it is needed, make whatever changes are necessary, and run off the tape," says Evelyn. "The MT/ST is used if there is an estimated 40-60% change in the document. For smaller jobs and fewer changes we use Mag Cards."

Though the Word Processing Center has been in operation for only one year, the women there have already succeeded in saving the Company approximately $175,000; this was accomplished by doing volume typing — proposals, status reports, etc. — in-house and not sending it out to a vendor. By using the Composer System when working on a proposal such as the F-14, Space Shuttle, etc., "we can save the Company money by keeping this work in-house," claims Evelyn. "The Composer can be set up for any type size and font you wish (bold face and italics), including headlines. It also adjusts to whatever line spacing you need. Just insert the tape, set the machine to your specifications, and let it run. It produces letter perfect documents every time.

Any questions?

"Our system is really catching on. More and more people are bringing us their typing," says Evelyn. "And why not, we not only turn out top quality jobs, we meet their deadlines, too."

If you have any questions, or need advice on a typing job, or maybe you have to meet a critical due date coming up, call WPC at Ext. 7849 and let them help you.

Honored for service. Capt. Bob Belter, Navy Plant Representative at Bethpage, recently presented awards to 15 persons for long-time Government service. Heading the list, with 35 years' service, was John Scalici, then followed 30-year personnel, Anna Picucci, Henry Amistadi, Francis Breitenbach, Anthony Campay, Joseph Choma, Norbert Eckel, Thomas Fischer, Phillip Lipari, Domenic Marmora, Dan Miller, William Rorke, Ralph Scalera, Nicholas Tartaglia, and Alfred Varasano. It wasn't over there, however; Bob Belter then 'poured' during a coffee klotch for the award recipients, their spouses, and co-workers. (Photo by Jim Wagner)

Pucci fires 690 in Black loop, high for season in GAA pin play

It seems only appropriate that a guy who has a hand in keeping the F-14 Tomcat flying high these days should do a little high flying himself. And so, Al Pucci, a propulsion technician on the F-14 line in Plant 1, soared far above all other keglers in the Black league a couple of weeks ago, establishing a loop record—and one for all GAA-sanctioned leagues this season—with a sparkling 690. Al reeled off lines of 217, 250, and 223 to reach that mark, and although he fell five sticks short of Art Grey's high-game record, Pucci strung 10 strikes in the second and third games.

Among the other highlights in recent sessions of the Black circuit were Fred Kuehne's 214-216-605, Ted Dija's 223-598, Rus Weber's 202-200-594, Carmine Vitale's 225-591, Frank Weber's 221-594, and John Barnes' 232-584. . . . Bill Allen's 220-584 paced Trader action. Other standouts were Tom Wright, 202-572; Charlie Gosline, 203-563; Dick Connelly, 226-212-562; and Hank Mehl, 560. . . . Eileen Aloise's 489 and a 234-609 by Andy Goshefski provided the members of the Hawkeye Mixed loop with something to shoot at, and the Wonders, second-place club in the standings, shattered the team series record by two sticks with 2,147, and fell 10 pins shy of the game standard with 756.

Dudonis notches 661

It was Bob Dudonis who made the big splash in Classified play. Bob hit the high series of 661 on games of 200, 225, and 236, good for a record. But that's not unusual; Bob held the old record, too. Others in the spotlight were Ed Danels, 236-583; Joe Whelan, 211-573; and Bob Ruotolo, 208-213-586. . . . Bob Ogilvie's 236-202-603 shaded Bill Meehan's 219-593 for individual honors in Syosset Mixed competition, with Rita Mathia's 559 high for the women. Monica Wojtyniak hit 519, Anna Wicks, 476; John Betterino, 234-587; and Eric Bunzel, 212-577.

The Unnowns are out of sight—in the wrong direction—as far as the team standings are concerned in the Aerospace league, but one of their big hitters, George Fowler, now holds the loop series record. George came through with 235 and 242 and finished with 653 to smash Dave Evans' old mark by 34 sticks. Joe Aquilino closed in that round with 238-608, while Joe Oakes registered 200-204-599. Earlier, Dave Evans scored 206-201-587 and Jim McCormack had 204-582.

Railton hits 640

In other action, John Railton fired 206-211-223-640—a series mark—to headline Hellcat play. Jack Nielsen's 204-202-603, Ed Cramer's 202-208-597, and Berb Herz's 206-205-598 were among the leading scores.

It was an interesting set to in the Masters league. The DJs racked up a record 668 team game on John Betterino's 244, Jerry White's 224, and John Eivers' 200, but they still trail the Raskals by a wide margin in the team chase. Other headliners were Joe Russo, 256-835; Ed Gabriel, 227-222-835; Betterino, 222-225-846; and Rick Sawey, 221-224-820. . . . Earl Schroeder's 232-209-634 broke a scoring drought in the Nite Owl circuit. Rudy Dunkley hit a brace of 203s, and Judge Locke fired 223 and 224. . . . Red gleanings uncovered Herman Miller's 215-581, Bob Nielsen's 214-581, and Ernie Maas's 574.

Al Pucci
Season's high scorer

Don Voight threw a record-breaking 258 in Classic league competition, and it turned out to be a welcome change from his first game, 152, and second game, 155. In the same round, Dan Avery hit 243 in a 543. . . . John Schneider totaled 571 to lead Rocket league listings, with Tom Reilly's 222-550 next in line. Rounding out the scoring were Larry Schneider, 545; Paul Havekotte, 544; and Fred Gregory, 539. . . . Sandy Rider hit 242-585 in the Blue Mixed to tighten her grasp on both women's marks—and they're high for the men, too, we might add. Other standouts included John Traina, 546; Ernie Sandoe, 544; Pat Curry, 458; Lou Ricci, 212-537; Joy Olenick, 455; and Pat Roth, 453.

Scoring barrage by Newcomers

All eight players in the Newcomers' lineup hit double figures in a basketball game against the Druids, and the score showed it: the Newcomers won the Tuesday after-hours tilt 134-55. Ed Krol scored 24, Doug Keuling, 23, Al Bauer and Marty Dewey, 18, Frank Quarto, 16, Lee Gendron, 12, Dennis Fecci, 11, and Vince Clerico, 10. It wasn't much of a contest.

Things were pretty much the same against the Digits. Thee Newcomers won that one, too, 116-80, with Krol and Quarto leading the scoring race with 22 points each. John Bell hit 20 for the losers. The Newcomers eliminated the Digits from title play and will meet the Hustlers in the league playoffs.

Larry Murphy poured in 33 points, a scoring high for him in the Grumman league, to pace the Hustlers' 126-67 victory over the Druids. Bill Foote hit for 22 points and Art Lih and Jim Cruthers added 18 apiece for the Hustlers. Ken Foreman scored 24 for the Druids. The win earned them a playoff spot over the Digits.

Earlier, the Hustlers edged the Digits, 103-99, as Jim Cruthers hit the nets for 40 points. Jim Boyce of the Digits was right behind him with 38, and Bob Garrett and Bob Schmidt were other Digit high scorers with 24 and 21 points, respectively. With all the high scoring, it was Craig Langwost's two key foul shots in the closing minutes that helped the Hustlers seal the verdit.

Call entries for second annual net tourney

The opening round of the second annual men's and women's all-Grumman tennis tournament, sponsored by the Grumman Athletic Association, is scheduled for Saturday, April 15, at Bethpage State Park. Mitch Rosenbaum, the varsity tennis coach and director of the tourney, reminds those who plan to try out for the varsity that results of the tourney will be used as a basis for selecting this year's Grumman tennis squad. He also encourages present team members to enter the tournament.

Last year, two participants who did well in the tournament, Bob Bentler and Joe DiStefano, were later selected to play with the varsity in the L. I. Industrial circuit.

Last year's tournament drew 80 singles and 33 doubles entries. Winners in the men's division were Fred Hermann, singles, and Al and Val Kirillin in doubles. Hermann will not defend his title, nor will he captain the varsity this year, as he is transferring to Point Mugu, California. There were not enough entrants for women's play.

Although play is scheduled for Bethpage State Park, should other courts be more agreeable to contestants, play can be switched to another location with their agreement.

The elimination-type tournament will include men's and women's singles and doubles, and will be played on Saturdays, starting April 15.

GAA will supply tennis balls, award trophies to the winners and runners-up in each division (singles and doubles), and will pay court fees for the semi-final and final matches.

Deadline for entering is Friday, April 7. All those who wish to enter the tournament should fill out the entry blank contained on this page and forward it to GAA, Plant 28B. For additional information, please call Chet Baumgartner, Ext. 2133 or 2269.

Tennis tourney entry

Singles

Men's ..... Women's .....

Name ..... Perm. No. .....

Plant ..... Dept. ..... Phone Ext. .....

Home Address ..... Phone .....

Doubles

Partner's Name ..... Perm. No. .....

Plant ..... Dept. ..... Phone Ext. .....

Home Address ..... Phone .....

Entry Deadline Friday, April 7
(Forward to GAA Office, Plant 28B)

List meeting dates for softball leagues

GAA has scheduled its first organizational meetings for the 1972 lunch-period softball season, and has asked that one representative from each team and the league commissioner attend these meetings at the GAA office, Plant 28B.

Plant 1: Wednesday, April 5, 11:50.

Plant 2: Tuesday, April 4, first lunch, 11:50; second lunch, 12:30.

Plant 3: Wednesday, April 5, 12:30.

Plant 5: Monday, April 3, 12:30.

Plants 6-7-8: Thursday, April 6, 11:50 (Plant 6 conference room).

Plant 27: Monday, April 3, 10:15 (cafeteria).

Teams in the after-hours leagues have been contacted by mail. Should these teams, or any new teams, want to be represented in the after-hours leagues in the 1972 season, a team representative should call Chet Baumgartner, Ext. 2133 or 2269. After-hours competition is scheduled to begin Monday, May 22. Deadline for entering a team in that play is Friday, April 28.

'Shuffle' to title

You don't have to go on a Caribbean cruise to make the scene in deck shuffleboard—although that's a thought. One combo that has been involved in the Plant 24 league, Bill Mason and Joe Horne, shuffled off with the championship there recently by ousting Leo Belcher and Al Bruscino in the playoffs. 40-25, 40-28, 40-30, 40-39, 40-20.

Varsity carries slim lead into bowling classic final

It promises to be an exciting final round in the L.I. Industrial men's pin classic tomorrow night, Saturday, March 25, at Mid Isle Lanes in Hempstead. After a slow start in the tournament opener, Grumman forged ahead in the second round, and stayed ahead of the 16-team field in the third round last Saturday—but just barely. The varsity pin squad carries a 17-pin lead into the finale tomorrow in a head-to-head encounter with A.M.F., now running second. Pan Am shows 8,433, Airborne, 8,357, and Fairchild Camera, 8,316.

Ben Plawski's 236-205-632 led the Grumman contingent in the second session of the classic, with Fred Skirde contributing 210-212-589 and Ernie Jenkins firing 212-587.

Last week, Plawski again paced Grumman with 214-200-601, and now heads all individuals with 1,827 for nine games, an average of 203. Four sticks behind Ben is Tom Keon of Airborne Instruments. Other Grumman scores in the third round were Skirde, 556, Jenkins, 527, Nick Malandro, 544, and Dave Evans, 579.

Following the final round on Saturday—the action starts at 8 p.m—trophies will be given to the championship team (based on total team pinfall for 12 games), championship runner-up, incentive team winner and runner-up (based on number of pins rolled over entering average), and individual awards for high game and total pinfall.

Grumman last won the tourney (which is also sponsored by the Company) back in 1968. Why not come out and root the squad to another one this year in the 31st annual tournament.

C pistol team still undefeated

Although Dave Rice led the Grumman scoring in recent L.I. Industrial .22 caliber pistol matches with 284, the spotlight fell on the Grumman C team in the sharpshooter division as it edged Republic, 979-969, to run its season record to 8-0. Mike Baumgarten's 262 paced that effort, with Bill Rommell's 246, Fred Sender's 243, and Charlie Quitter's 228 other contributions to the score.

Rice's 284 helped his team, the Grumhan As, rip Brookhaven Lab, 1,081-1,048, in the expert division of the Industrial circuit. Aiding Rice were John Crawford, 271, Bob Bergeman, 263, and Herb Wolter, 263. For the Grumman Ds, Al Berka's 282, Roger Seybel's 275, Art McKee's 271, and Greg Criscione's 264 added up to 1,092—good enough to edge Sperry's 1,073 total.

In another sharpshooter match, Matt Spencer hit 237, Tom Tavitian, 236, Bob Hambrecht, 231, and Tom Cassino, 225, as the Grumman E squad lost to Republic, 929-1,012.

Rice was again the standout for the Grumman center-fire team in the South Shore league, hitting 278 during a 1,021-1,076 loss to Roslyn. Rounding out the team scoring in that loop were Art McKee, 254, Phil Boehm, 252, and Doug Crooks, 237.

Net tickets

Should you want to root on the N.Y. Nets in their American Basketball Association playoff encounters with the Kentucky Colonels, you'd better hurry on down to the nearest Employee Services Office. Discount tickets will be carried at ESO for the Nets playoffs on April 5, 7, and 10 at the Nassau Coliseum, with $6 tickets going for $5, and $7 seats going for $6. Children can get in for $2.75 apiece.

The Colonels have Dan Issel and Artis Gilmore leading their attack and a record of 61-16, second only in professional basketball to the L.A. Lakers' 66-12 in the National Basketball Association.

Quarto nets 29

Grumman dropped Lutheran in the L.I. Industrial basketball circuit for the second time this season, as Ron Bartlett paced the varsity to a 90-70 victory. Bartlett scored 16 points, with team mates Frank Quarto and John Ebron contributing 14 apiece. The win over Lutheran gave the Grumman squad a 4-3 mark in the league.

Earlier, Quarto and Jim Cruthers, with 18 and 15 points respectively, led Grumman to an easy 70-44 triumph over LILCO B.

LILCO A team fared no better. The "first" team from LILCO went down 81-72 before Grumman, with Frank Quarto's 29 points high in the game. Ed Krol netted 16, and Bartlett and Cruthers added 11 each.

Intruders plan busy schedule

The tournament trail for the Grumman Intruders starts Sunday, April 9. That's the first practice seession called by manager Jack Keane, whose message to softball players at Grumman is: "Come on out and win a position."

Jack believes that championships run in five-year cycles, and since the last (and the first) national championship ever won by Grumman occurred in 1967, the year 1972 looms large for the Intruders. Keane wants it abundantly clear that there is no clique—no fat cats, so to speak—who are assured of their position on the team. All spots are open.

And with the extensive practice sessions that have been scheduled—they continue on April 11, 13, 16, 18, 20, 25, and 27, he expects that any ball player who has the ability should be able to make it clearly obvious by the time the regular season gets under way.

Tryouts are scheduled for 12:30 p.m. on Sundays and 4:30 p.m. on weekdays at the Plant 3 ball field.

According to Keane, the Intruders will be very active in tournament play while preparing for the national tournament this year. Grumman will compete in the Glen Cove Invitational Tournament Memorial Day weekend, the Rhode Island Invitational in mid-June, and the Rheingold Invitational over the Fourth of July. The Intruders' regular schedule includes action in the Jones Beach Industrial league and the Nassau County "A" Slow-Pitch division at Cantiague Park in Hicksville.

Is 1972 the year? Maybe it depends on you.

For Rent

APT.: 6 rm., ½ mi. Bethpage plts. ,nr. town, $275/mo., 1 mo. sec., June occup. WE 5-0885, evgs.

APT.: Dix Hills, sch. dist. 5, 3 bdrm., din. rm., pvt. ent., ½ bsmt., $245/mo., util. not incl., 2 mo. sec., avail. 4/15. HA 3-5462, after 7 p.m.

APT.: 2 bdrm., 1st fl., din. rm., use of bsmt. & gar., $285/mo., 2 mo. sec. WE 1-6634.

COTTAGE: Loon Lake, Adirondacks, pvt. bch., boats, sport equip., etc., $60/$80/wk. 212 265-6536.

ROOM: Bethpage, lrg., pvt. ent., share bath, work. woman, $28/wk. 731-6105.

HOUSE: Bayport, 1½ bath, firepl., wash. & dry., 1 acre, $275/mo., ref. & sec. 472-1643.

COTTAGE: Huntington Sta., 1 bdrm., liv. rm., kit. & bath, lease, avail. now. FO 8-4340, bet. 5-7 p.m.

APT.: Nr. Plt. 30, 3 rm. unfurn. WE 5-0148, after 3.

APTS.: Bellmore, 3 rm., new. decor., nr. RR, stores, sch., etc., pvt. home, $215/mo., util. incl. Also 4 rm., yd., bsmt., gar., $265/mo. WE 8-6246.

MT. CAB.: Mod. 2 bdrm., slps. 6, firepl., pvt., nr. everything, furn., 3 hrs. Nassau, nr. Pepacton res., State Pk. lands, river, season, $800. 623-2603.

HOUSE: Bohemia, sma., furn., lrg. plot, gar. PI 7-1097, after 7 p.m.

ROOM: 2 mi. Grumman, furn. 798-1676.

Ride Wanted

REGO PK.: Elmhurst, Forest Hills area to Plt. 5/25. 592-9508.

AMITYVILLE: 110 Broadway, to Plt. 35, 8-4:30 p.m. Doris Bolton, Ext. 86813.

PARK SLOPE: Bklyn. 212 857-2355.

HICKSVILLE STA.: At 8:10 a.m. to Grumman Data Ctr., lv. Data Ctr. 5 p.m. 212 857-2355.

BRENTWOOD: To Plt. 5, 7:48-4:18 p.m., Mon. thru Fri. or will alternate. Edith Muller, Ext. 87397.

LONG BCH.: To Plt. 2. GE 2-3311.

Car Pool

PERTH AMBOY, N.J.: To Staten Isl., to Belt Pkwy, to So. State to Plt. 4, 5, 15, 25, 30, 35. or 39. Nick Giovanos, Ext. 7776.

REGO PK.: Elmhurst, Forest Hills area to Plt. 5, 25. 212 592-9508.

FAR ROCKAWAY: 5 Towns area to Plt. 15, or ride 1-2 times. 212 363-6869, evgs.

LEVITTOWN: To Grumman Data Sys. Ctr., Stewart Ave. Dorothy Hershkowitz, Ext. 2871.

Wanted

CAB: For 6 or 8 guns. AN 5-2934, after 5 p.m.

SHOP MANUAL: For '66 Pontiac. Joseph D'Anna, Ext. 86366.

HOUSEMATE: Male to share farmhouse w/other Grumman engineers, nr. Bethpage. 367-3180, after 7 p.m.

ENG.: Mod. airplane, ignition-type, for antique eng. collect., new or ued. MA 6-2825.

at your SERVICE

This is a free service to Grumman personnel for non-commercial advertisements, accepted on a first-come, first-served basis. Classified advertisements are carried in PLANE NEWS only on the basis that everyone replying to such advertising will receive fair and equal consideration regardless of their race, creed, color, or national origin.

Type or print ad on form available at Employees Service and Engineering counters, and send via interplant mail to PLANE NEWS, Plant 5, Bethpage. List home phone (with area code if outside Nassau or Suffolk). Limit: one ad per person per issue. No item under $10, no firearms or ammunition.

Swap

HEMI: Early Chrysler sma. block 270 c.i., hi-perf., 11 in. clutch & pressure plate, 3-spd. transmission, comp. o'haul.. nd. gaskets & carb., for gd. 35 hp short shaft outbd. 581-2232, after 6 p.m.

For Adoption

KITTENS: 4 male, 2 tiger. 543-5283.

SIAMESE: Sealpoint, neutered male, 3 yr., well train. 751-6452.

MOBILE HOME: And or space, for sale or rent, W. Ctrl. Suffolk area, mature sgl. male. 581-0403, after 4:30 p.m.

APT.: Nassau County, 3 or 4 rm., yg. bus. couple, for approx. 7/1. 938-3943.

DRILL PRESS: And 6 in. belt sander, work. cond., up to $100/ea. 878-1647.

SEW. MACH.: OL 9-7290.

GAR.: Bethpage, Levittown area, pref. nr. Grumman Bethpage facil., will pay $10/mo. OV 1-8260.

BICYCLE: 5-spd. lgt. wgt., touring. I. Goldman, Ext. 9260.

Wanted

TIRES: 2 w/w, 695x14, gd. cond. 587-8158.

BOAT: 23 to 25 ft fbgl. cab. cruiser, approx. 3-5 yr., fam. use, price accord. to mfg., sz. & yr. TU 4-0059.

APT.: 2 bdrm., pref. Nassau County. 538-0108, after 7 p.m.

HOUSE: Stuart, Fla. or vic., 2 or 3 bdrm., gar. or carport. CH 9-1023.

For Sale

HOUSE: Hicksville, mother/daugther, 5 rm. over 4, lrg. bsmt., firepl., w-w, appli., 100 amp. serv., 2 car gar., $35,990. WE 8-3991.

HOUSE: 3 bdrm. cape, walk to RR, sch., church, enclos. heat. porch, fin. bsmt. w/bar, gar., carpet., s-s. LI 1-0200, Mr. Pinkerton, bet. 9-3 p.m.

HOUSE: Brentwood, 4 bdrm. hi-ranch, din. rm., eat-in-kit., den, 2 car gar., terrace, patio/brick barbecue, w-w, nr. So. State or LIE, ¼ acre, fenc., $34,500. 273-4755, after 6 p.m.

HOUSE: Shirley, nr. sch., train, shops, & bch., 3 bdrm. ranch, $18,900. 281-9325.

HOUSE: N. Babylon, 3 bdrm. ranch, panel. liv. rm. & kit., fin. bsmt., 75x100 fenc., att. gar. & patio, use for mother/daughter or income. 587-7680, after 5 p.m.

MISC.: Kit. cab., spray. wh., wh. & gold formica counter tp., sink cab. & sink, 36 in. wh. gas stove, cov. 10 ft. of wall space, $75. PI 6-7974.

MISC.: Metal, wh. shower stall, 36x36 w/fix., $25; 2 fbgl. awn., 32 & 38 in. wide, $15/both; TV/phono cons. w/drs., $10. 271-9097.

CASE. WIND.: & screens, 37x27. 231-8442, after 6 p.m.

SCRN. DR.: & hardware, hvy. gauge alum., std. sz., prov. for gl inserts, $40 Stephen Dondero, Ext. 1001.

BABY STROLLER: Twin, front & bk., $20; sgl. stroller, $10. 681-9588.

For Sale

BABY FURN.: Lullaby wh. prov. canopy crib & match. dbl. dress., Bilt-rite Pk. Avenue navy blue coach carr. 669-9022.

MISC.: Childcraft crib, $25; Tony hobby horse; RCA radio phono, 45 rmp, $10. OV 1-7891.

MISC.: Crib, comp. w/matt., chenille sprd., pillow, 4 pillow cases, 4 blanket hold., 3 animal pic. w/ frames match. crib., chrome hi-chr., infant pad. 765-2114.

CRIB: Edison, dr. brown wal. fin., w/matt. & spg., infant seat, $20. 265-0161.

BABY FURN.: Crib, chest, port. carr., swing, lamp, hi-chr., car seat, playpen, dress. tbl., car bd., walker, bathtub, boy's cloth., infant to sz. 4. 581-6770.

BABY CARR.: Bilt-rite coach, navy blue ext., wh. int., matt., windbreak., rubber. cov., ask. $30. LI 1-4243.

BOAT: 15 ft. Thompson, 40 hp eng., just o'haul., trlr., ask. $625. HR 2-1568.

BOAT: 23 ft. Broadwater, $2,300; '71 Chibi mini bike, $225; Seeburg 100 juke box, $75. MO 9-5919.

TROJAN: 16 ft., 17 hp elec. outbd., trlr. & access., $600; 7 pc. mod. formica dinette w/hutch & server, $200; Deming deep-well pump, $30; mobile ham sta., comp., $75; fix ham sta., comp., $100; antique radio, $30; hi-ranch, mother/daughter, N. Seaford, $42,500. 796-0617.

BOAT: 11 ft. dinghy, wood, 2 man w/oars, $40. 757-4724, evgs.

SAILBOAT: 18 ft. sloop w/cab., slps. 2, inbd., hd., comp. o'haul. '70, trlr., $1,575. 543-0044, after 6 p.m.

BOAT: 18½ ft. fbgl., Winner Wildcat, '70-'71, 60 hp Evinrude elect. start., Navy tp., vinyl carpet., life preserv., walk-thru windshld., ladder, Navy, horn, hvy. dty. trlr., used less than 20 hrs., $2,700. AN 5-2196.

BOAT: 35 ft. '54 Sportfisherman, cust., 275 hp Crusader, FWC, slps. 4, $5,800. 666-5674.

SAILBOAT: 11 ft. Super Snark, fbgl., yel. hull, sail., rig., ctrbd., & tiller car-tp. mod., 75 lb., used 1 season, ask. $125. WE 8-7919.

BOAT: 17 ft. Dixie, fbgl., 85 hp Johnson, '71 Holsclaw tilt trlr., Navy tp., side wind., winter cov., 20 gal. gas tank, C.G. pkg., elec. bilge pump, xtras, $1,500. 585-2353.

BOAT: 25 ft., cab., 95 hp Norberg inbd., 418 hrs., $250. 581-3511.

GRUMMAN BOAT: 12 ft., car tp., 5.5 hp Evinrude Fisherman outbd., tank & whlr. std., reason. 226-9076.

BOAT: 25 ft. Sportfisherman, '60 Ulrichsen, flybridge, pole hold., fishwell, cush., hd., 125 hp Chrysler Crown, 3 yr., 80 hrs., $2,400. 587-3877.

STEREO: Dyna amp. & Dyna FM stereo. tuner, cons., mtd., approx. 20w per channel, $100 Jay Kobelin, Ext. 87160.

STEREO: Macy Supreme record player, 2 spkrs., 1½ yr., $45. OR 6-6574.

LEMANS: '64 conv., nds. bks., pwr. steer. & bks., R&H, $275. PY 6-7914.

PICKUP: & camper, '71 GMC, ¾ ton pickup, 350, V-8, posi., pwr. steer., camper pkg., air cond., radio, pwr. disc bks., Rd. Cruiser camper, 10½ ft., slps. 6, refrig., stove, hd., heat., dual sink, $6,000. 421-3415.

VOLVO: '67, 122S, new clutch, valves, front bks., hi. mi., some bdy. dam., $400. Martin Klop, Ext. 87417.

SAAB: '70, 96, 40,000 mi., radial tires, AM/FM, $1,350. WE 5-2865.

EDSEL: '59, std., orig. owner, $250. CH 9-7644, after 4 p.m.

VW: '71 camper, pop tp., 15,000 mi., $3,500. JU 7-2360, after 5 p.m.

MONZA: '66, 2-dr., 140 hp, 4 carbs, $275. 288-2807.

VW: '68, auto., $950. 249-5193.

MINI BIKE: '71 Cheetah, 4 hp, $100. 864-5645, after 4:30 p.m.

MOTOR BIKE: '68 Kowasaki, 650 cc, low mi., xtras, 589-6280, after 5 p.m.

BUICK: '66 Le Sabre, pwr. steer. & bks. 929-4696.

CHEVY: '64 Impala, 230 c.i., 6 cyl., 4-dr. sed., new tires on rear, auto., R&H, yel. w/blk. int., 77,000 mi., ask. $400. 888-0002, after 6 p.m.

STA. WAG.: '65 Chevy, Impala, V-8, auto., R&H, $550. 265-0479.

BOAT: 22x7½, fbgl. hull, Marscot, bas, twin Gray 4-75s, Navy tp., side curt., wipers, auto./man. bilge pump, compass, hd., spd. to 25 mph, ask. $1,700. 669-9189.

MAKO: 22 ft., 125 hp/pwr. tilt, 3 wk. in water, all Mako options, $4,500. 728-1930.

For Sale

CAMPER: '70 Ford, ¾ ton F-250, spec. pkg., aux 25 gal. gas tank, limit. slip diff., V-8, pwr. steer. & bks., auto., 9.50x16.5, 8 pr. tires, '70 Gem 11 slide on fully self cont., refrig., htr., 30 gal. press. water, hot water heat., slps. 4, xtras, $5,000. JU 8-4076, evgs.

CAMP. TRLR.: Hilltop, slps. 6, dinette, stor. cab., gas stove, 20 lb. propane tank, icebox, water, elec., 120v/12v, spare whl., $850. 549-8038.

TRAVEL TRLR.: 18½ ft. Driftwood, self cont., hitch, awn., bike rack, spare tire, xtras, ask. $2,400. HA 1-4435.

RAMBLER: '65, 880 Ambassador, 4-dr., 232, 6 cyl., auto., pwr. steer. & bks., R&H, 41,000 mi., $275. AN 5-6372.

BOAT: '65 Ulrichsen, 29 ft., trunk cab. cruiser, slps. 4, hd., dinette, sgl. eng., FWC. GR 5-9406, after 5 p.m.

SAILBOAT: '70, O'Da Mariner 2+2, 20 ft., C/B sloop, comp. cust. & equip. for class assoc. rac. or cruis., '70 Holsclaw trlr., '71 Evinrude 6 hp outbd., '71 NYS appd. hd., Rolly Taker sails, Telo battens, Harken blocks, sink & water tank, run. lgts., fend., dock lines, anchor, winter cov., safety equip., $4,000. 543-1931.

BOAT: '71 Caravelle, 115 hp Johnson, 17 ft. fbgl. tri hull, full canv., xtras, $2,700. MO 5-4240.

MARINE ENG.: 225 Gray, F.W., new bar manifolds, risers, 1.5:1 Warner trans., new fuel pump, as is $200, or sell parts. 864-3317.

SKIFF: 16 ft. New England, flat btm., nds. little repair, 18 hp Evinrude, $150. LT 9-2819.

BOAT: 15 ft. Lyman runabout, nds. work, $150. 775-0246.

SURFBD.: 7 ft. 2 in. DeDsign I, $80. 842-9211.

FIXTURE: 40w flour. w/louvers & tubes, 2 & 4 tube type, $10/ea. PY 8-6338.

WATER PUMP: Clayton Mark shallow well jet, 1/3 hp, 115VAC, 20-40 PSI differential pres. switch, 30 gal. galvan. tank, inc., $40. JU 6-8533.

FISH. EQUIP.: Pompanette fight. chr., Marlin-Bluefin mod., $550; AP 9 transist. Loran, $125; Walters Keel cool., up to 390 c.i., $125. 669-8539, after 6 p.m.

RACE CAR SET: Sears prof. 1/24 slot, 2 cars, can make oval or fig. 8 trk., $35. WE 5-0297.

JR. GOLF CLUB SET: #wood, putter, 3, 5, 9 irons & bag, $15. 724-2626.

PRECIS. TOOLS: Calipers, micrometer, Starret, protractor 6 in. rule, 12 in. rule, mach. inst. comb. sq. 669-4506.

TRUMPET: Olds Ambassador, w/access., $75. 541-4432.

SKI BOOTS: Sz. 10 wide, blk., buck., inner & out. boot, less than half price. 421-3792.

FISH TANKS: 2, S.S. 10 gal., reflect., heat, pumps, asst. equip., approx. 50 half-blk. guppies, $30. AT 6-0279.

SAILBOAT: O'Day Sailer, 17 ft., Tee Nee trlr., 3 hp Johnson outbd., rig. for trlr., $1,400. 269-4373.

SUNFISH: Wood, new spars, $200. WE 5-1644.

BOAT: 26x9½ fbgl. Stamas, Americana Fisherman mod., f.w.c. Chrysler, 210 hp, L/O, transistor ignition, depth sound (D-60) sniffer, compass, auto/man. bilge-dual batt. & safety SW, 7 ft. Vee bunks, hd, dacron Navy tp., side, drop curt. & full cockpit cov., pilot & comp. seats, ask. $5,000. 669-9189.

HOUSE: Commack, 3 bdrm., din. rm., eat-in-kit., s-s, fenc. ¼ acre, fin. bsmt., w/poss. 4th bdrm., carpet, appli., nr. all pkwys, 5¼% mtge. take over avail., ask. $34,900. 543-4116.

BUICK: '69 Spec. deluxe, 2-dr. sed., 28,000 mi., V-8, snows, & rims, pwr. steer., auto., antique gold, $1,400. 735-0176, after 5 p.m.

MOBILE HOME: '70 Liberty, 60x12 liv. rm., dinette, kit., full bath, 2 bdrm., oil heat, ctrl. air cond., $6,800. 585-1967.

TRLR.: '70 Apache Mesa III, slps. 6, fully equip., xtras, $1,200. 271-1680.

SAILBOAT: Blue Jay, all rac. gear, dry sail., $650, trlr. avail. R. Rulon, Ext. 2693.

HOUSE: Commack, 4 bdrm. col., formal din. rm. & liv. rm. w/w-w, drapes, panel. den w/firepl., lrg. kit. w/dinette area, slate foy., 6 appli., 1½ bath, patio, fenc., 1/3 acre, nr. sch., $45,000. 543-3784.

PROPERTY: Ketcham Estates, E. Northport, 7½ acres, apprd. map for 13 bld. lots. AN 1-0299.

LAWNMOWER: Craftsman, 4 hp rid. rotary mower, 24 in. cut, 4 cycle eng., $75. FO 8-3426.

HOUSE: Commack, 3 bdrm. ranch, s-s, w-w, appli., fin. bsmt., 18 ft. pool, nr. stores & sch., $29,500. 864-7214.

For Sale

MUSTANG: '65, 6 cyl., $250. AN 1-0884.

STA. WAG.: '64 Falcon squire, pwr. steer. & bks., new tires, $200. 433-4741.

FORD: '70 Torino, 429 SCJ, 4-spd., 18,000 mi., pwr. disc bks., cons., 4:11 posi rear, poly, mags, xtras. 732-8071, after 5:30.

MOTORCYCLE: '71 Suzuki, 350cc, 2,100 mi., gold, 2 helmets & raincoat, $650. 822-2079.

HONDA: '72 all terrain cycle, 3-whlr. w/lgts., $525. AN 1-0884.

HONDA: '69 trail bike, 90cc, 8 spds., 1,500 mi., $250. LI 1-8590.

HONDA: '70 CB-7, 4-cyc., 5-spd., aqua & gold, $1,195. 212 799-6362.

MISC.: '67 Corvette radiator, $25; '67 Corvette disc assem., $15. OV 1-8260.

MISC.: Ford 4-spd. transmission w/Hurst linkage, $125; 2 s/s Gragar mags, 14 in., Ford, $35. 724-5682, after 4:30 p.m.

ENG.: & transmission, '69 Ford, 209 c.i., 3-spd. auto., sep. or all, other parts avail. FI 7-0640.

TIRES: 2, 650-13 snows, 4 ply, 2, 650-13 reg., 4 ply, C78-14 Dynglass, all w/Chevy rims, $50. MO 9-4278.

GREMLIN: '70, o'sz. eng., fl. shift, under 20,000 mi., new 4 ply nylon tires, orig. owner, $1,300. 473-8582.

PUPPIES: Boxer, champ sired, fawn w/mark., male & fem., docked & cropped, gd. health & disp. OV 1-7381.

PUPPIES: Beagle, AKC, male & fem., tri-color fox, rabbit, or plain hound. 567-0229.

PUPPIES: Irish setter, AKC, homebred, all males, $100/& up. SU 1-3587.

PUPPIES: Poodle, AKC, minis, cream/wh./apricot, gd. qual. & temper. 732-3552.

PUPPIES: St. Bernard, AKC, show qual., male & fem., $100 & up. MY 4-1955.

PROJ.: Argus auto. slide, mod. 540, $35. PI 1-7167.

CAMERA: Graflex Norita 2¼x2¼ S.L.R. w/80mm f2.0 lens, $330; 160mm f4.0 Norita, $150. 212 923-8509.

CAMERA: Bolex H-16, pan cinor zoom lens, filt., lea. case, $395. 864-3134.

MISC.: '71 Airquipt slide proj., remote mod. w/auto. focus & fwd. & reverse, self cont. case, 100 slide, spill proof roto tray, $35; Mansfied 8mm film edltor, 5 in. scrn. w/focus ctrl. & film splicer, $15. Charles Miller, Ext. 9852.

CAMERA: Olympus 35-SP, 35mm camera w/f1.7 lens, meter, case & warr., $70. 212 923-8509.

MISC.: N gauge trains, layout w/2 transformers, 10 switches, 25 ft. main line, 6 sid., 18 bldgs., 3 eng., 25 fr. & pass. cars, $100; stamps, first day cov., over 500 cov. from '39-'70, in album, $120. 724-0409.

MISC.: Meinor travel. sprinkler, $15; Tecumseh 3 hp snow blow., $50; elec. 22 in. GE tbl. mod. ironer, $10. TA 6-2284.

MISC.: Reel type lawnmover sharpner, $160; '68 Chevy van, 108 sub., $1,050. 485-9166.

MISC.: Mach. Kennedy tool box, micrometers, depth gauges, calipers, dividers, xtras, $75/, can break up sets. IV 6-4304.

BUICK: '60 Electra, 4-dr. sed., new batt., snows, water pump, bks., reverb radio, $225; '69 VW Bug, lt. blue, new bks., H.D. shocks, new tires, xtras, one owner, $1,350. 727-0312, after 4 p.m.

CAMARO: '68 Chevrolet, new radiator, 4 new w/w, snows, 6 cyl., auto. cons., bkt. seats, blue/blk. int., blk. vinyl roof, avail. 6/1, $1,100. PI 1-3625, weekends only.

CADILLAC: '63 conv., $200. 585-4798.

YAMAHA: '69, 250cc, YDS-5, 2 helmets, spare whls., low mi., $400. 269-4245.

TRLR.: Motorcycle, will accom. 3 bikes or go cart xtras, $130. 798-2493.

AUTO PARTS: Corvette rear, comp., for '63-'72, $100; 4-bbl. carb & manifold w/cleaner, for 283/327, $25. 862-9388, after 6 p.m.

TRANS. FLUID: Type F, 1 case, 24 qts., $10.50. 293-8983, after 5 p.m.

TYPEWRITER: Royal elec., lrg. carr., $100. BA 3-5009, evgs.

POOL: 21x4 Doughboy silverline, 30 gauge lin., pool cov., D.E. filt., xtra steel sidewall, xtras, $250. 938-3003.

CORVETTE: '58 Chevrolet, 2 tps., new paint & tires, orig. cond., nds. 2 dr. panels, $1,150. 293-8796.

PICKUP: '66 Ford Bronco, 4-whl. drive, 6 cyl., new snwplow, grn. & whl., new tires, bks., & batt., $1,450. 249-8284.

ENG.: '64 VW, 40 hp, comp. rebit. w/gen. & muff., inst., $165. 273-6239.

For Sale

YAMAHA: 305cc, low mi., $425. 888-0422.

SPINNAKER: O'Day Mariner, Hild, 2 sheets, halyard & bag, $75. HA 1-1235, after 6 p.m.

AIRPLANE: Aeronca Champ, comp., nds. recov. 266-3037, evgs.

HOUSE: Hicksville, 4 bdrm. cape, 1½ bth, full fin. bsmt., w/bar, all appli., w-w, pool, waterfall, prof. lndscpd., low tax., $34,990. 822-5829.

DIN. RM. SET: 7 pc. fruitwood china cab., tbl. w/ pads, 5 chrs., $195; mahog. rocker, $30; love seat, $60. 266-3262, after 6 p.m.

STEREO: AM/FM phono, Magnavox cons., 60 in. lg., record stor., $80. 271-9097.

END TBL.: Col. 665-0876, after 6 p.m.

SEW. MACH.: Port., Visetti, zig-zag, $50. MO 7-5599.

CAMERA: Yashica, 24/66 twin lens reflex, case & blt. in exp. meter, never used, $80. 423-5299.

CAMERA LENSES: 100mm f2.8 FD canon lens, case, new, $105; 35 mm f2.0 FD canon lens, case, new, $130. 212 923-8509.

CLOTHES: Women's, sz. 9-18; children's infant to 12; maternity, 9-18. 864-7359.

PUPPIES: Boxer, AKC, rdy. by 4/19, fawn or brindle, males, $90. fem., $60, champ line. 669-2345.

STEREO: G.E. phono, detach. spkrs., 45 adapter, 2 dia. stylus needles, $40. 826-8363.

STEREO: Motorola cons. phono, AM/FM radio, $50. MO 1-2460.

RADIO EQUIP.: C/B ham, mobile & fix base sta. MO 9-6977.

AMA. RADIO STA.: Heath kit HW-16, 90w CW transceiver w/spkr., crystals & ant., less than 1 yr., $125. 751-1256.

LGT. METER: Weston Master IV, prof., $10. 234-8310.

TV: 23 in. Admiral B&W, cons., $50 or best offer. MA 6-2825.

ANT: Color, FM, JFD 39 element, Cornell rotor & ctrl., 40 ft. telescoping mast, splitter & shield. cable, $50. 751-9571.

CAB.: 2 wal. spkr., w/15 in Stromberg Carlson spkrs. OV 1-6122, after 6 p.m.

TRLR.: 21 ft. RecVeh., slps. 8, comp. self cont., awn., scrn. rm., straightline hitch, stabilizer bars, Kelsey-Hayes bkup bks., xtras, $2,990. 751-0279.

MOTOR HOME: '70 Open Rd., 10,000 mi., auto., air cond., lps. 6, AM/FM. monomatic hd., $6,800. 799-4821, after 6 p.m.

TRAVEL TRLR.: '69 Tag-A-Long, self cont., slps. 6, xtras, $1,250. 281-8063.

MOBILE HOME: '70 Newport Caravelle, 56x12, 2 bdrm., furn., carpet., wash., TV, $6,200; '62 Chevy Impala, air cond., stereo, tape deck, pwr. steer., 350 c.i., $350. 727-9010.

BOAT: '70, 16 ft. Wellcraft w/trlr., 40 hp Johnson elec. start, Navy tp., anchor, 2 gas tanks, batt., compass, $1,500. 273-4315.

SAILBOAT: Sunfish, 46527, $425. 589-2802.

DBL. SINK: Gd. for bsmt. or summer pl., $10. WE 5-0885, evgs.

FIREWOOD: Split & logs, $20/per cord. 623-4046.

JUKE BOX: Seeberg 100, plays 45rpm records, ask. $75. MO 9-9316.

LINER: New 16x32 in grnd. pool, 20 gauge, $75. 667-9073.

FLT. INSTR.: Person., in Cessna 50, reason. 234-6546, after 6 p.m.

ELEC. GUITAR: 1 pickup, hollow bdy., 9 mo. 234-6546.

CITIZENS BAND RADIO: 23 channel transceiver, allied/realistic TRC-24 mobile unit, 12 VDC, 115V, AC pwr. supply, 2 mikes, 20 ft. coax., TVI filt., ant., $80. 921-8265.

OLDS: '61 conv., Dynamic 88, $75. 921-7245, after 5 p.m.

VOLVO: '68, 1800s, air cond., o'drive, AM/FM, Michelin X tires, '70 en. 666-0077.

VW: '66 Bug, tan, new bks., clutch, batt., & paint, just tuned, ask. $800. 665-8360.

MUSTANG: '68 GT302 Fastback, 4-spd., 4-bbl., dual ext. hvy. dty. sus., pwr. disc., tilt whl., sport deck rear seat, blue, whl. C stripe, 47,000 mi., $1,250. 661-6337.

MONTE CARLO: '70, auto, pwr. steer., bks., & wind., fact. air cond., fact. 4-spkr. stereo tape deck, tilt steer. whl. rear wind. defrost., grn. w/blk. vinyl roof, $2,000. 878-2178.

STOOLS: Bar or counter, 3, W.J. Sloane, bkrest, swivel seat, foot rail, ask. $85. Joseph Engel, Ext. 9823.

For Sale

PUPPIES: Boston terriers, male, AKC reg., born 2/26, $125. 277-3768.

BICYCLE: 20 in. boy's stingray, gold frame, chrome fenders & rear mtd. bkt., $15. Joe Weiss, Ext. 7181.

MINI BIKE: 4 hp Cheeftah, ask. $110. WE 8-5138, after 5:30 p.m.

ENGAGE RING: Pear shpd., 2 tapered baguettes, 2 mo., ask. $495. MY 4-4126, after 8 p.m.

DIAMOND: Approx. 1 carat, round stone, ask. $700. 212 779-4535.

HOUSE: Smithtown, Sunken Meadow area, 4 bdrm. col., 2½ bath, den w/firepl., 2 car gar., scrn. porch, carpet., recent redecor., pvt. wood cul-de-sac, 6% mtge., $45,990. 757-8301.

HOUSE: Freeport waterfront, 3 bdrm. hi-ranch, 2½ bath, playrm., Fla. rm., on canal. 223-0156.

HOUSE: Commack, 4 bdrm. split, eat-in-kit., fin. bsmt., 3 bath. o.h.w. heat, 40x20 sunken pool, patio w/lgt., gar., xtras, $45,000 or best offer. 543-9023.

HOUSE: Pt. Jeff. Vill., 3 Vill. sch. dist., 6 rm. cust. cape, ¼ acre, closed st., 3 bdrm., eat-in-kit., din. rm., 2 bath, xtras, walk to harbor/stores, $32,900. 473-5592.

HOUSE: Franklin Square, mother/daughter, 4 over 5, nw. storms & scrns., w-w, oil hot water, full bsmt., xtras, ask. $43,000. IV 1-2079.

TENT TRLR.: Wayfarer, slps. 5, 5 cubbies, new canv., attach. wind-up trlr. jack, attach. 12x12 canv. awn. w/poles, $425. 543-6634.

CAMPER: '67 Nimrod Riviera, 3 new tires, xtra. whl., canopy, Coleman stove, ice box, fold. tbl., chrs. 921-8856.

WHL. CAMPER.: '68 Chuckwagon, fold. hdtp., slps. 6, stove, icebox, heater, sink, 12 & 110v, dinette, $1,200. AN 5-5051.

BOAT: 15 ft. wood., trlr., all access., $175. 585-8359.

SLOOP: 28½ ft. Pearson Triton, cust. int., slps. 5, race equip., spinnaker, 30 hp inbd., recent valve job, $9,700. 692-7320.

MOTOR: '71, 4 hp Johnson outbd., 35 lbs., $175. 286-0899, bet. 5-7 p.m.

HOUSE: Hicksville, 3 bdrm. cape, 2 bath, den, scrn. porch, fenc. in bk. yd., oil heat, air cond., w-w, all appli., attach. gar., xtras, 935-8374.

HOUSE: Farmingdale, 3 bdrm. cape, din. rm., eat-in-kit., full bsmt., gar., walk. to vill. & staa., $29,900. 249-4616.

HOUSE: Massapequa Pk., all brick ranch, F'dale sch. dist., air cond., fin. bsmt., w-w, s-s, firepl., patio, all new appli., $37,500. LI 1-9070.

HOUSE: Long Bch., 4 bdrm., liv. rm./din. comb., porch, 2 patios, nr. bch., unheat., will take bk. mtge., low pay., $16,990. HR 3-4732.

CAMPER: Apache Ramada, slps. 8, opens to 21 ft., stove, sink, ice refrig., ask. $1,200. AT 6-1197, after 5 p.m.

COUCH: 4 pc. blk. sect., ask. $100. MY 4-0648.

FURN.: 2 love seats, col. style, $50. 586-8130.

PIANO: Baldwin cons. & bench, open grain mahog., $675. HA 3-1399.

MISC.: 24x4 pool, filt., ladder, $50; Penna gas lawnmower; Craftsman hand mower; Fifigurama slender. mach., $15; 40 hp Evinrude elec. start., '67 outbd. motor, $80; 12 cu. ft. refrig., $15; RCA color TV, $20; exh. fan. CH 9-8416.

BABY CARR.: Bilt-rite coachette, reason. 479-0508, evgs.

OBITUARIES

Plane News has received word that death has come to the Grumman personnel listed below. We extend sincere sympathy to relatives and friends.

ALONZO TURNER of Facilities Maintenance, Plant 1, died March 9. He was 63 years old and had been with the Company since 1964. He lived at 85 Fredericks Ave., Freeport.

KEVIN J. MORAN of P/S Support Systems, Plant 34, died March 10 at the age of 42. He had been with the Company nine years. His home was at 884 Cleveland St., West Hempstead.

PATRICK W. O'HARA died March 15 at the age of 42. He had been with Grumman since 1967 and had worked in Inventory Control, Plant 3. His home was at 28 Heyward St., Brentwood.

For Sale

CAMERAS: New, Olympus 35-SP, 35mm, fully auto., wf1.7 lens, $75; new, Yashica 124-G, 2¼ tlr w/ CDS meter, $85. 212 923-8509.

MACH.: Exercise row., used once, $12. M. De Genova, Ext. 2964.

PUPPIES: Mini poodles, AKC, cream/wh./apricot, $50 & up. 732-3552.

HOUSE: Coram, Exit 64 off LIE, 4 bdrm. col., 1½ bath, din. rm., eat-in-kit., 4 appli., w-w, bsmt., attach. gar., patio, 1/3 treed acre, bkyd. borders on wild life preserve, nr. shops, sch. dist. 10, ask. $31500. 698-4667.

HOUSE: Holbrook, 3 bdrm., ranch, fenc., firepl., full bsmt., eat-in-kit., din. area, ¼ acre, s-s, appli., panel., Sachem dist., lndscpd., $32,000. 588-7184.

HOUSE: Bethpage, 6 rm. ranch, 3 bdrm., din. rm., eat-in-kit., $31,000, prin. only. 731-7180.

HOUSE: Farmingdale, lrg. brick split, 3 bdrm., 2½ bath, fin. den, fully air cond., mid 40s. MY 4-3742.

HOUSE: Levittown, 3 bdrm. cape, firepl., new kit., carpet,, gar., lrg. liv./din. rm. 796-2766.

HOUSE: Uniondale, 4 bdrm., 40x100, 1½ car gar., bsmt., asb. & brick ext., attic, in grnd. spkls., $29,000. 929-6196.

HOUSE: Westbury Levitt ranch, East Meadow sch., lrg. country kit., sep. din. area, 4 bdrm., 1½ bath, firepl., in-grnd. pool. 735-1227.

HOUSE: Holbrook, Emmy bldrs.. 7 rm. L shaped ranch, eat-in-kit., den, ful bsmt., beam. ceil., w-w, patio, lndscpd., treed, 3 appli., $30,000. 585-1849.

PROPERTY: Clinton County, N.Y., 29.44 acres, N.Y. 189, hd. surface rd. front.. evergreens. elec. & tele. avail., ½ mi. S. Churobosco, $4,300. 732-5954, after 6 p.m.

BDRM. SET: 7 pc. Drexel, mahog.; Westbend auto. humidifier, 3 rm. cape., $35. 747-7159.

MISC.: Desk, cocktail tbl., end tbl., all lgt. wal., contemp.; child's sch. desk, ask. $40/all. IV 1-6247.

BUNK BD.: Blue & wh. metal, steel spgs., foam matt., Holland made, ladder & remov. sides for upper, can be sep., $80. MO 1-3924.

SAAB: '71, V-4, 20,000 mi., $1,800. HR 2-1568.

VW: '70, grn., 7,500 mi., R&H, $1,650. 878-0978.

RD. RUNNER: '70, blue w/blk. int., pwr. steer., 4-spd., lgt. group, 383 c.i., posi rear, perf. hd. paint, radio w/spkrs., front & rear, steel rd. whls., F70x14 poly, hvy. dty. susp., ask. $1,700. 676-8732, after 6 p.m.

FORD: '67 Galaxie 500, 2-dr. hdtp., V-8, pwr. steer., xtras. 883-6265, after 5 p.m.

FORD: '63 Fairlane, auto., 55,000 orig. mi. & owner, $250. PY 6-1837.

VW: '64, blue, R&H, 579-4594.

FORD: '71 Capri, 17,000 mi., 4-spd. stick, bkt. seats, AM/FM, heater, rad. tires, 27 mpg, $2,000. 475-4984.

CUTLASS: '70, 4-dr. sed., pwr. steer., air cond., vinyl roof. 261-1186.

DODGE: '66 Polara, 2-dr. hdtp., 383 c.i., pwr. steer. & bks., auto., ask. $625. 581-7617.

GTO: '67, pwr. steer., R&H, bkt. seats, cons., blk. vinyl tp., vinyl int., gold, w/w, 335 hp, 400 cc eng., 4-bbl. carb., auto., $1,395. John Herman, Ext. 84646.

CHEVY: '65 Biscayne, auto., R&H, 6 cyl., orig. owner, 58,000 mi., $550. GE 3-2669.

DODGE: '70 Challenger, 318 c.i., V-8, auto., air cond., 2 mtd. snows, $2,195. JU 7-3171.

BUICK: '62 Special, 4-dr. sed., blue, 6 cyl., hi-mi., new tires & int., inspect., $175. CH 9-2781.

MOTORCYCLE: '71 BSA, 250cc, 2,000 mi., helmet & hvy dty. chain, $525. Martin Klop, Ext. 87417.

MOTORCYCLE: '71 Suzuki, 125cc, 22 hp, woods or motorcross, 21 in. whl., $500. OV 1-1286.

TRAVEL TRLR.: '70 Tag-a-long, 16 ft., slps. 6, self cont. AN 6-1101.

CAMPER: '68 Rohmer pickup, on 1 ton Chevy, 283 truck, slps. 4, fully equip., $1,650. 727-6441.

TRLR.: '71 Apache Sol. State, mod. Mesa, slps. 6, heater, sink, stove, elec. & water hookup outside, elec. bks., wind. awn., canopy, $16,000. MY 4-5814.

MOBILE HOME: '69 Newport Contessa, 12x60, 2 bdrm., air cond., patio, shed, set up in adult pk., Hyde Pk., $9,000. 914 876-6619.

WHLS.: 2, 15 in. from Rambler, 2 spare tires, mtd., $12/all. 735-5261.

WHLS.: 2 chrome reverse whls., lugs, lock & hubs, for Ford, Chrysler & Amer. motors, $40. 888-1167.

SNOWS: 2 used, for Javelin, & rims, $10. 431-9635.

HEATER: VW, 6 volt elec. sys., used 1 season, gas, type, gd. on Beetle o rbus, $35. 261-2475.

SLOOP: 25 ft. fbgl., Pearson, bit. '65, 3 sails, 6 hp outbd., slps. 4, ask., $5,900. 261-1186.

For Sale

BOAT: '67 Sportscraft, 17 ft., w/B/B seats, '68, 40 hp Johnson elec., '67 Shipmate T/B trlr., xtras, $1,200. MO 1-4318.

BOAT: 28 ft. Ulrichsen Exp. cruiser, 200 hp Flagship, '70 - 50 hrs., fully equip., radio, depth find., cush., etc., ask. $3,250. 581-2355.

BOAT: 18 ft. cust. Craft cat, 90 hp Johnson elec. start w/lift, alternator, batt., anchor, run. lgts., & trlr. WE 5-3902.

BOAT: '70, 16 ft. Wellcraft w/trlr., 40 hp elec. start Johnson, Navy tp., anchor, line, 2 gas tanks, batt., compass, life jackets, $1,500. 273-4315.

BOAT: '64, 17 ft. Penn Yan, 75 hp Evinrude elec., Navy tp., trlr.. $800. 751-2976.

MFG: 16 ft., 75 hp Evinrude, elec. start. & shift, cush., fire ext., anchor, etc., xtras, rdy. for water. 883-5286.

SAILBOAT: 18 ft. sloop w/cab., slps. 2, inbd., hd., tlr., comp. o'haul. in '70. $1,575. 543-0044, after 6 p.m

DATSUN: '70, 2,000, 5-spd., conv., low mi., radials, 4 cyl., O.H.C., $2,150. TU 8-0165, bet. 6-10 p.m.

BONNEVILLE: '69, grn. hdtp., w/w, aird cond., all pwr.. snows w/whls., $2,100. MY 4-2544.

DODGE: '68 Charger, 383 eng., air cond., pwr. steer. & bks., vinyl roof, drk. grn., blk. int., orig. owner, w/w, bkt. seats, cons., $1,400. PI 6-4830.

PONTIAC: '68 LeMans, 3-spd., vinyl tp., blue, new batt., clutch, & muff., $1,150; Heathkit TA 27, reverb & tremolo guitar amp & cust. bit. 12 string guitar, $135. PY 9-6512.

VW: '65 Bus, flared wh. wells, new paint, Camaro bkts., wood panel., 57,000 mi., xtras, $800. FL 2-3569, after 6 p.m.

KAISER: '51 hydra., 4-dr. sed., never o'haul., for restoration, $400; '57 pwr. glide Chevy wag., new eng., tires, batt., xtras, $350. 744-9674.

CHEVELLE: '66 Malibu conv., V-8, acto., pwr. steer., new snows, ask. $400. 698-2629.

PONTIAC: '70 GTO conv., air cond., pwr. steer., bks., wind., & seats, auto., low mi. 757-8301.

MG: '70 Midget Mark III, wire whls., Michelin radial w/w, radio. oil cool., front anti-roll bar, tonneau cov., full inst. cluster, $1,800. 226-8698.

MERCURY: '69 Cougar XR-7 conv., 351 4-V, hdtp., 4-spd., pwr. steer. & bks., limit. slip, H.D. sus., lea. int., AM/FM stereo, radial tires, styled whls., 36,000 mi., $2,100. 212 968-1459.

COUGAR: '69 XR7, 8 cyl., air cond., pwr. steer., new bks., low mi., $1,975. 798-3148.

VOLVO: '65, 1800-S, red, blk. int., Perelli radials, 5-spd. o'drive, $1,500. MY 4-5251.

TRIUMPH: '69 GT6+, AM/FM, o'drive, new Dunlop tires, ask. $1,625. 864-5259.

VW: '70 Bug, tan, 4-spd., snows, $1,525. 728-2772, evgs.

CHEVROLET: '63, 4-dr. sed., std., R&H, new tires, ask. $300. TA 6-3075, evgs.

CADILLAC: '71 coupe, every option; '68 Thunderbird, full pwr. James La Sala, Ext. 84271.

THUNDERBIRD: '68, 4-dr., yel./blk. lea. int., pwr. steer. & bks., air cond., $1,600. 587-0357.

CHEVROLET: '70 cust. 2-dr. sed., Impala, turbo-hydro, R&H, snows, new oil & filt. in trans. OR 1-1417, after 6 p.m.

OLDS.: '62, 88, 2-dr. hdtp., pwr. steer. & bks., R&H, 2 snows on rims, new batt., reg., $150. WA 1-1835.

VW: '67 Bug, 44,000 mi., new batt., exh. sys., $795. 724-7484.

HORNET: '71 SST, 5 mo., 6 cyl., pwr. steer., bench seats, sun roof, xtras, $2,250. 473-7707.

OPEL KAD.: '68, 2-dr., red, rear spkr., radio, clock, tach, w/w, 4-spd. man., 30 mpg, 43,000 mi., $775. 473-1162, after 6 p.m.

PONTIAC: '69 Firebird, grn., 350, V-8, auto., 3-spd., pwr. steer. & bks., cons., xtras, $1,800. 751-3512.

OLDSMOBILE: '70 Cutlass supreme, conv., V-8, auto., pwr. steer., snows, radio, gold on gold, orig. owner. 249-1383, evgs.

CHEVROLET: '63 Impala, 4-dr. hdtp., 82,000 mi., nds. transmission work, xtra 3 tires & rims, ask. $75. 864-1049.

FORD: '62 Fairlane, 221-V-8, auto., pwr. steer., R&H, $100. 549-4093.

MG: '68 Midget, wire whls., tonneau cov., recent. tune-up, 46,000 mi., $850. 265-1681.

BUICK: '67 Electra 225, auto., V-8, 4-dr. hdtp., pwr. steer., bks., wind., seats, & ant., rear spkr., defogger, 48,000 mi., ask. $1,150. FO 8-5722.

HOUSE: Islip, 4 bdrm. hi-ranch, din. rm., eat-in-kit., rec. rm. w/full wall firepl., patio w/brick wall, 2 car gar., 1½ bath, w-w, s-s, dishwash., $35,000. 277-3768.

For Sale

HOUSE: Greenlawn, 3 bdrm. ranch, ¼ acre, din. rm., eat-in-kit., att. gar., firepl., fin. bsmt., playrm., s-s, w-w, 2 appli., lndscpd., $29,900. 261-5485.

HOUSE: S. Farmingdale, 8½ rm., brick & shake shingle front, 3 bdrm., 1 panel., 1½ bath, eat-in-kit., din. rm., 13x22 liv. rm., 2 rec. rm., lndry, 2 zone o.h.w. heat, att. gar., w-w, in-grnd. pool, $42,500. CH 9-6817.

HOUSE: Medford, nr. Exit 64 of LIE, 3 bdrm. split, din. rm., lrg. cath. ceil. liv. rm., panel. fam. rm., gar., oil heat, w-w, w-w, shrubs, $25,000. 289-0179.

HOUSE: Melville, Hunt. Sta. Half Hollow sch. dist., 9 rm., 4 lrg. bdmr., fam. rm. + firepl., 2½ bath, 2 car gar., 16x34 gunite pool, 1-1/3 acre, xtras, $55,000. 427-1617, after 5 p.m.

HOUSE: Hollis, Queens, 4 bdrm. dutch col., 1¼ bath, foyer, scrn. porch, firepl., gar., 60x100, $550 tax., nr. everything, $33,900. 212 HO 5-0740.

HOUSE: Manorville, nr. Calverton plt., 9 rm. brick front ranch, 4 bdrm., 2 w/w-w, 3 bath, fam. rm. w/firepl., s-s, 8 lrg closets, all appli., bsmt., 2 zone o.hw.w., att. gar., 2½ acre, $45,000. 878-2178.

PROPERTY: Poconos Mt. Lake Estates, slight. under 1 acre, border. on unfenc. Fed. Game Preserve. 747-3454, evgs.

PROPERTY: 1.2 acres, Ridge, resid. 543-2941, evgs.

PROPERTY: Wading River, 125x150, pvt. bch. rgts., wood., $9,500. 368-3048, after 5 p.m.

MISC.: Ital. prov. cut velvet uphol. sofa, avocado grn., import. hand carv. frame, used 6 mo., $495; crystal chandelier, 6 lgsts., 18 in. dia., Ital. import w/chain & ceil. plate, antique gold, $35. 212 671-8556, evgs.

FURN.: Ital. prov. sofa, 10 ft., hot pink, 2 wh. arm chrs., plastic cov., hot pink ceil. to fl. drapes, $700. 751-6830.

DIN. RM. SET: Ital. prov. wal. oval tbl., 42x60, 3 boards, opens to 96 in., 61x15x6 china closet, 6 chrs., $400. Al Massucci, Ext. 86268.

FURN.: 8 ft. contemp. orange sofa w/slipcov., $160; contemp. orange floral club chr. w/slipcov., $75. 543-6374.

MISC.: 4 pc. blond mod. bdrm. suite, dbl. bd., comp., $150; Hotpoint elec. wall oven, $25. 261-0595.

MISC.: Lane wal. coffee & end tbl., $35/set; 10x12 Kodel polyester rug, celery, $50; Danish lounge & 2 chrs., $75. 665-6639.

MISC.: Maple youth bd., 2 yr.; 6 in. foam matt., new; new 4 fit. btm. sheets; new 2 fit. matt. pads, $60. 728-0994.

DINETTE/KIT. SET: Formica tp., brown & gold, 4 chrs., 2 leaves, $66. 938-6140.

WASH./DRY.: Maytag port. w/std. 727-1938.

WASH. MACH.: Kenmore, 3 cyc., 2-spd., hoses & manuals, $35. HT 4-2253.

RUG: 9x12 shag, mod. design, gold. rust, brown, $100. 667-0128, after 6 p.m.

SEW. MACH.: Slant needle Singer, mod. 301, comp. w/desk cab., ext. attach., $60. 333-7849, after 4 p.m.

MISC.: Whirlpool wash., $60; Yard-Man lawnmower, self prop., reel, $45; Lomart Diatomite filt., 15 ft. pool cov. w/hold-down cable, vac., skimmer, $35; 8.85x15 poly cord tire, 8 ply rate, $10. 888-4662, after 4:30 p.m.

plane GRUMMAN news

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Hurry, hurry, hurry . . . put GAA over the top in member drive

There's a big cloud of mystery hanging over the heads of that great gang of sports who toil at Plant 28B. There's a real, first-class conundrum . . . a mind-tweaker that rivals the medieval question of how many angels can dance on the head of a pin.

The people of the GAA (Grumman Athletic Association) have been bent (but not broken!) by their dedicated search for the answer to the momentous question:

Why not 100 percent participation?

Why not, indeed. It's a most curious affair, worthy of the talents of Sir Arthur Conan Doyle's seeker for truth, Sherlock Holmes. Alas! That giant of investigators is no longer with us, and all that we can do is hope that he's hot on the trail of other queries that, for all we know, crop up now and then in that Other Realm.

GAA would like to call in others, the still-alive ones, but we know that's currently beyond their reach, what with tight budget-times and all. No, the stalwarts of GAA must carry the full burden of the investigation, however grievous, however weighty. Doggedly they press on. . . .

You hold the key

The key to the puzzle, think the GAA thinkers, cannot lie in the issue of money. After all, one dollar—a single U.S. buck—is not a high hurdle. It's not even a low hurdle. Money, they believe, doesn't come into it. In fact, by simply plunking down that littlest bill in our currency system, the potential yield is manyfold. For in truth, that wee dollar is but a ticket to all sorts of events. Take some for instances:

- Hobby, art, photography, and flower shows
- Intramural basketball, softball, men's and women's golf and bowling, pool, tennis, and paddle ball
- Reduced prices for foreign trips and professional sports events
- Lunch-time activities such as handball, softball, chess, and ping pong—Oops!—table tennis
- Sanctioned clubs, such as Antique and Sports Car Club, Aquatic Club, Astronomical Society, Coin Club, Engineering Model (Plane) Society, Ex-Service Men's Club, Garden Club, Pure Breed Dog Club, Horseback Riding Club, etc., etc.

Proof positive that for all the reasons for not joining the GAA drive, money ain't one.

Is it possible, one wonders, that some people loathe sports . . . of all kinds? That at a tender age they've nurtured a secret grudge, like having been bonked on the bean by a spray hitter of the Agnew genre? Or that . . . well, who knows? But odd it is that the GAA, in their never-ending struggle to provide Grummanites with a well-rounded and interesting recreation program, does not —year after glorious year—get 100 percent participation. And after all, the Company, year after glorious year, always chips in.

Is it possible?

Perhaps there are some who have never heard of GAA. No! That cannot be! Our fast-moving world isn't moving that fast. The plucky folks of GAA know better. They can't alert everyone by sending up daily smoke signals (pollution, you know), but the word has gone out, from GAA, from concerned friends, from Plane News. (Plane News? What in the hell is that? Oh! Yes, yes! The ads, the ads!)

To add a bit of spice, GAA will collect all of the ticket (membership) stubs, put them in the large turning drum, and on April 7 there'll be a drawing and 15 people will walk away with automatic Polaroid cameras, and 50 others will end up possessing sets of Grumman glasses. So jot down that date: April 7.

Any questions? If there are, pick up Ma Bell's handy-dandy instrument and dial directly to the director of the GAA fund drive, Mike Cherry, Extension 2133.

(By the way, help GAA resolve that agonizing question of why not 100 percent. Do it soon. It makes one weep seeing those people climbing that wall.)

I'd like one. Mary Casiglia of the LM Program, Plant 25, has what she'd like to win—an automatic Polaroid camera. Fifteen of them, and 50 sets of Grumman glasses, are prizes in the GAA drive. (Photo by Bob Settles)

Flower show dates

Here comes spring, and it is hardly too early to get out the garden equipment and start looking for the growth of garden bulbs planted last fall.

The Grumman Garden Forum, headed by Kay Zuk of Employee Services Office, Plant 2, has met and set up the Flower Show program for 1972:

Spring Show: Thursday, May 11, Plant 30 Cafeteria. Manager, Frank Vernon, Ext. 1868; assistant, Marie Catalano, Ext. 2909.

Rose Show: Thursday, June 15, Plant 35 Cafeteria. Manager, Gus Preiser, Ext. 3028; assistant, Chuck Belensky, Ext. 2275.

Fall Show: Thursday, October 19, Plant 3 Cafeteria. Manager, Dot Kappenberg, Ext. 2114; assistant, Karl Hagen, Ext. 3661.

Director of Aviation Logistics for Army, Joseph Cribbins (3rd R) is shown on inspection tour of Stuart facility with (L to R) Chris Wold, OV project pilot; John Lueck, OV Program manager; Bob Benito, OV Program director; Lt. Col. Arthur Bowdoin, who heads Army Plant Activity at Stuart; and Art Melrose, general manager

Army adds eight more Mohawks to Stuart maintenance program

STUART, FLA.—The first of eight more Mohawks the Army is going to put through a cyclic maintenance overhaul program at the Grumman facility here arrived at Plant 77 last Friday, March 17.

Joseph Cribbins, director of Aviation Logistics for the Department of the Army, brought word of the Army's decision to Lt. Col. Arthur Bowdoin and Art Melrose while on an inspection tour of the Plant 77 facility. Bowdoin is commanding officer of the U.S. Army Plant Activity at Stuart, and Melrose is general manager of the plant.

The eight Mohawks—side-looking airborne radar OV-1Bs and infra-red OV-1Cs—will be delivered back to the Army starting in late summer. At present, six other Mohawks are being overhauled at Stuart.

"A cyclic overhaul might be compared to a 50,000 mile check-up for an automobile—although, naturally, the inspection and any possible remedial action are certainly much more extensive," says John Lueck, OV-1 Program manager. "We do a complete tear-down of the entire aircraft. For example, wings, landing gear, and engines are removed, all components and fittings are inspected, and, if necessary, repairs or replacements are made."

The Grumman Mohawk has been the Army's principal aerial surveillance system since the early 1960s, and has operated in Vietnam for nearly 10 years. With the Mohawk's photographic equipment, side-looking airborne radar, and infra-red sensors, the OV-1's two-man crew can monitor enemy operations in daylight or darkness and in inclement weather, and keep the Army field commanders immediately informed of enemy activities.

At present, the Army plans to overhaul additional Mohawks in Fiscal '73 but, according to Lueck, "the award for next year's contract will depend to a large extent on our exhibiting a continued good quality product at the lowest possible cost. If we expect to remain competitive, we must always strive to do a better job on each succeeding plane that goes through the overhaul program."

Mohawk log. Lt. Col. Thomas Payne turns over log book of Mohawk that will undergo maintenance overhaul to Andy Griffaton, Army Quality Control, with inspector George Huise of Grumman looking on. (Photos from Stuart)